PART OF

# A Clinical Lecture

ON

# INTERNAL URETHROTOMY,

## AND ON THE INSTRUMENTS EMPLOYED FOR PERFORMING IT.

*Delivered at University College Hospital on November 29th*, 1875.

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(*Reported by* Mr. G. BUCKSTON BROWNE.)

THERE are various ways in which the operation of Internal Urethrotomy for Stricture may be done, and there are numerous instruments for the purpose. There are two different principles of action in making the necessary incision, and the instruments may be grouped in two classes by this means.

I. The stricture may be cut from "before backwards" on a guide previously passed.

II. Or a blade may be introduced through and beyond the stricture, which is then cut from "behind forwards," in which case a guide is unnecessary.

Before considering these, I may state that the situation of a stricture is an important element in relation to the applicability of internal urethrotomy of any kind, and also as to its necessity as a mode of treatment. Thus:—

1. A stricture at or near the external meatus is always extremely undilatable, while at the same time it may be divided with the greatest ease, precision, and safety.

2. A stricture existing in any part of the anterior three or four inches of the urethra partakes, but in a somewhat less degree, of the intractable quality named, and may be cut with almost as much facility and safety as those in the previous class. As a rule, it may be said, the nearer a stricture is situated to the orifice of the urethra, the more necessary it is to cut, and the safer it is to do so.

3. Strictures in the bulbous portion of the urethra, which may be considered as generally ranging between four inches and five inches and a half from the external meatus, are less liable to be unmanageable by dilatation than those of the preceding classes. But when necessary to cut them, it is easy and quite safe to do so as a rule, slightly less so than those in the preceding class; the difference being due, no doubt, to the larger amount of erectile tissue there as compared with the anterior part of the urethra. Bleeding, therefore, may be more considerable, and other risks, such as they are, more liable to be encountered.

I show you urethrotomes in great variety here, chiefly of French make, the operation having been largely practised in France long before it was employed here. Modifications innumerable of what were originally simple, perhaps we may say rude, instruments, have been made during the present century in that country, and more recently elsewhere. Most of those known by the names of Leroy d'Etiolles, Civiale, Amussat, Reybard, Ricord, Trélat, Sédillot, Maisonneuve, Stafford, and others, are before you; there is one also, a recent one, of Dr. Otis, which, like Reybard's, distends the passage at the same time that the incision is made.

I select two as types of the two different systems described of using a cutting instrument—the urethrotome of Maisonneuve and that of Civiale. I select the former instrument because it is not only a type of one which cuts from before backwards, but because it has been more largely and generally employed of late years on the Continent perhaps than any other. The instrument of Civiale I have selected because it is the typical one of the other system—viz., that of dividing the stricture from behind forwards.

The urethrotome of Maisonneuve consists of a slender guide or conductor in steel, the size and nearly the form of a No. 1 or 2 catheter, but grooved throughout its course. This is first introduced through the stricture into the bladder. Along this groove slides a blade of triangular form, the base of the triangle being attached to a long steel wire, while the two other sides of the triangle project considerably. This blade can be pushed, by means of a handle attached to the wire, through the whole course of the urethra. (See Fig. 1.) The apex of the triangle, which is the salient part, is blunt, and the lower side

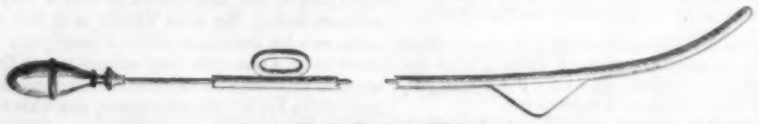

FIG. 1.—The Urethrotome of Maisonneuve.

of the triangle only is sharp and will cut. In the act of passing the blade, the healthy part of the urethra is protected from incision by the blunting of the apex (like the button of a foil in fencing), while the sharp side divides certain of the hardened tissues which it meets.

Now, my objection to this instrument is simple and distinct, and I do not hesitate to say is fatal to it in respect of its efficiency for a case of confirmed and indurated stricture, such, indeed, as constitutes that form of the disease which most requires treatment by incision. It is an axiom accepted by most, if not all, who have carefully observed the results of urethrotomy by any method, that if an incision of stricture is required at all, it is essential that the whole of the obstructing fibres should be divided. No one laid more stress on this doctrine than Syme, of Edinburgh, after he had had a considerable experience of his method by external division. The cases of relapse after that operation he had no doubt were chiefly those in which he had cut insufficiently and left a few fibres undivided. The justice of this observation was verified repeatedly by myself then, and also since, in my own practice, with internal urethrotomy. Now, what happens with Maisonneuve's instrument? The blunt apex, which enables the blade to pass without injuring the healthy urethra, fails to cut the most elastic or yielding fibres of the stricture, which, by reason of their yielding character, permit the blade to pass through by stretching them. The blade incises, no doubt, the strongly marked and hardest portion of the stricture, but all the obstructing tissue is not divided, especially that for some distance before and behind the maximum point of narrowing, and these uncut fibres will at no distant period of time show their presence and reproduce contraction. Further, by no manner of using the instrument can you control or regulate its power. It is a mechanical apparatus or machine, which just accomplishes a certain amount of action and no more. This alone is for me a serious ground of objection to any instrument.

Now, suppose for an instant that it were possible for you to have the stricture before you open to your eyes and hands; you certainly would take a little scalpel and employ it for each case according to its needs, intelligently dividing the obstructing fibres as much as is necessary, and no more. But with a very little practice it is perfectly easy to do this without seeing the stricture—that is, to apply a little scalpel, dividing where you wish and not elsewhere, just as you divide the constricting fibres at the ring of a hernial sac. And I need scarcely say that this intelligent action of yours will produce something better than the work of a machine which any ignorant person can employ just as well as you. The difference in the two cases resembles that which exists between the music of an organ produced by a handle, and the music which results from the facile hand of a skilled performer.

It is a question of no mean importance which arises from the comparison of incision made by machinery and incision made by the intelligent hand. That is the real question in urethrotomy as presented in these two systems. And the instrument I now show you, which I always use, and

have operated with so many times in the wards here, is the type of the method which affords the opportunity of making the incision according to the operator's will and judgment. It is nothing more than a little knife with a long handle, and is used precisely as we use a scalpel anywhere else. Just as we should use a small knife in tenotomy, without the sense of vision, where it is not necessary, but guided by the sense of touch, so do I advise you to cut in urethrotomy. I carry the parallel one step further, and remind you, that just as it is essential in tenotomy to divide completely the tendon, and also any little minor band of constricting tissue which opposes the perfectly free play of the joint, so is it essential to make the same complete division also in urethrotomy. The ultimate success in either operation depends on attention to these particulars.

The instrument which I hold in my hand, and to which I have been referring, is the urethrotome of Civiale, made much smaller, as I prefer it to be, than is customary in Paris. The shaft of mine is about the size of No. 3 English scale, with an oblong bulb at the end not larger than No. 5 or No. 6. Within this is a little blade which, by a clever contrivance, the operator can make to issue at will, as much or as little as he desires, and which he can also sheath instantly at his pleasure. The bulbous end gives him the power of exploring the urethra at the time of the operation, and of determining precisely where and what he ought to divide. (Fig. 2.)

The bulb is to be introduced, say fully half or three-quarters of an inch beyond the maximum point of narrowing felt, the blade is then to be projected there, and drawn

FIG. 2.—The Urethrotome of Civiale.

steadily through the whole of the constricted portion outwards towards the meatus, in which direction the incision is sure to be certain and complete.

Now I at once anticipate an objection which I expect you all to raise. I expect you instantly to exclaim, "Why, if an instrument so large as No. 6 can be passed through the stricture, should there be any occasion to cut at all? Surely it is for small strictures, through which only the finest instruments can be passed, that an operation is necessary, and for such this instrument of Civiale is obviously unfitted by its size?" Such criticism is quite natural at the first glance, and from those who have not learned by considerable experience certain important facts about confirmed stricture.

I reply, first, that the *narrowness* of a stricture alone, however extreme, does by no means render a cutting operation *always* necessary. Some of the narrowest strictures I have ever seen have been very successfully and rapidly treated by simple dilatation.

Secondly, the quality which makes incision of a stricture necessary is, as I have previously shown, "resiliency"—that property which leads it to contract again rapidly after any dilatation. This quality affects strictures which will admit No. 5, No. 6, or No. 7 quite as frequently as narrower contractions.

Thirdly, supposing it is necessary to cut a stricture which is narrow and only admits No. ½ or No. 1, there is *never any difficulty in dilating it temporarily* up to No. 6 for the purpose of admitting the instrument I recommend.

All you have to do is to keep the patient in his room from three to five days with a small soft gum catheter tied in, which produces scarcely any inconvenience; and thus by "continuous dilatation" you can always bring the most resilient stricture to the required size for the operation. Having arrived at No. 6, you are enabled to perform the operation in the best possible circumstances. And the few quiet days spent in preparation are advantageous rather than otherwise; the result furthermore being that you can now make an incision in the manner I have described, directed by your intelligence and adapted to the particular case.

For safety to the patient and excellence in result, both in regard of his present and future condition, I greatly prefer the operation I have described to any other method I have ever seen.

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BEQUESTS, &c., TO MEDICAL CHARITIES.—Mr. Wynn Ellis bequeathed (in addition to those previously mentioned) £5000 to the London Hospital, £4000 to the Cancer Hospital, £4000 to the Royal Free Hospital, £2000 each to the Metropolitan Convalescent Institution, the Hospital for the Paralysed, the Earlswood Asylum for Idiots, the Metropolitan Free Hospital, the Female Lock Hospital, the Male Lock Hospital, the North London Consumption Hospital, the Brompton Hospital for Consumption, the Middlesex Hospital, the Sussex County Hospital, and King's College Hospital, and £1000 each to the Hertford Hospital, the City Dispensary, and the Chelsea, Brompton, and Belgrave Dispensary.

# A Lecture
ON
# THE APPEARANCE OF PARALYSIS ON THE SIDE OF A LESION IN THE BRAIN.

BY C. E. BROWN-SÉQUARD,
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GENTLEMEN,—Since the time of Mistichelli's discovery (in 1709) of the decussation of the anterior pyramids of the medulla oblongata, it has been universally admitted that one lateral half of the brain is the centre, or contains the centres, for the voluntary movements in the half of the body on the opposite side. Very strong—I may say decisive—arguments can be arrayed against this theory. On the one hand, either the anterior, the middle, or the posterior lobes of the brain, or a great part, or very nearly the whole of one hemisphere, or also a very great part of a lateral half of the pons Varolii or of the medulla oblongata, can be destroyed without paralysis; while, on the other hand, a paralysis may appear in one limb, or in both upper or both lower limbs, when the lesion is only in one lateral half of the brain. In other cases, and this is the principal object of this lecture, a paralysis may appear in one or in both limbs on the side of the lesion of the brain. If the universally admitted theory were true, most, or at least many, of the above-mentioned facts could not have existed; and if the new views first originated by Fritsch and Hitzig were true—if, in other words, special centres existed, one for the movements of the arm, one for those of the leg, many of the above-mentioned facts could also not have existed.

What I have just said of centres can be said of conductors also. If the conductors for the voluntary movements of the limbs on one side passed through the other side of the crura cerebri, the pons Varolii, and the medulla oblongata, a deep alteration, or a destruction, of a great part of one half of these organs would *always* be followed by a paralysis of the limbs on the other side. It is far from being *always* so.

The same thing may be said of the face and the tongue. A lesion in one half of the brain above the pons Varolii can produce a paralysis of the face or tongue, either in the corresponding or in the opposite side, and there is no relation between the intensity and extent of the facial or lingual paralysis, and the degree, the seat, or the extent of the disease.

On the one hand, therefore, there is not *always* what we should find were the universally received theory quite true; and, on the other hand, there are a great many facts in absolute opposition to the theory, as regards not only the movements of the limbs, but also those of the face and the tongue.

That this theory must be rejected is not, however, the only necessary conclusion from the facts, the existence of which I assert; another conclusion also issues forcibly from these facts. It is that one half of the brain is sufficient for the movements of the two sides of the body. It is not without the greatest reluctance that I have come to admit the correctness of this last view—reluctance assuredly well grounded in a practitioner seeing every day cases of paralysis occurring in the limbs, the face, or the tongue on the side opposite to that of the lesion in the brain. I need not say that I felt at once that to put down the old theory and to replace it by mine, it was not sufficient to have facts against the universally admitted doctrine; it was essential also to explain how paralysis can appear indifferently in one or in the other half of the body from a lesion in the same part of the brain.*

In the actual state of science the cases of paralysis on the side of a lesion of the brain are looked upon with very dubious eyes. Dr. James Copland† denies almost absolutely that there are such cases. He states that the lesion found may have existed without producing paralysis, and that the paralysis that was observed may have had its cause in a lesion in the opposite side of the brain, not found after death. I do not doubt the possibility, even the probability, that it was so in some cases, but I will prove that, at least sometimes, the brain-lesion found on the side of a paralysis was the real cause of that loss of voluntary movement.

Before examining clinical facts, I will say that experiments on animals have given me this unforeseen result, that *a paralysis on the side injured always follows certain injuries of the surface of the brain.* The lesion which has the greatest power to produce this direct paralysis consists in a burn of a part of the surface of one hemisphere of the brain. The anterior, the middle, and the posterior lobes possess the power of generating that paralysis, but the two last parts more than the first. The deep-seated parts of the brain—i.e., the walls of the lateral ventricles, the corpus striatum, the optic thalamus—have also that power. The paralysis so produced is very slight, and it is variable as regards its seat: it usually exists in one of the limbs on the side of the lesion, sometimes in both; it also appears sometimes in the abdomen, the thorax, the face, the neck, the bladder.‡ If the burn of the surface of the brain is deep, and very extensive, it produces sometimes a considerable paralysis in the four limbs, more intense in the two abdominal limbs, or in the two thoracic limbs, and greater, in those instances, in the limbs on the opposite side than in those on the side of the brain-lesion.§

The irritation due to a burn of the surface of the brain in rabbits, guinea-pigs, cats, and dogs, is not the only cause able to produce a paralysis on the side of a brain-lesion. Long ago Méhée de la Touche‖ found that a transverse section of certain parts of a lateral half of the brain or of the cerebellum in dogs is sometimes followed by a paralysis on the same side. I have seen the same thing, but very rarely, and the paralysis has been less than that which was seen by the surgeon just named.

If a paralysis appears in dogs and other animals on the side of a lesion of the brain, we certainly can look upon the same thing as possible in man; nay, there is a probability that it sometimes exists. This being stated, let us see what are the facts observed in man in which a paralysis has, or seems to have, existed on the side of the brain-lesion. I may startle many of my hearers in stating that I have collected *more than two hundred* of such cases. Burdach,¶ out of 258 cases of paralysis in one half of the body, states that there were 15 on the side and 243 on the opposite side of a lesion in the brain. W. Nasse,** besides the 15 cases of Burdach, knew of 26 cases of paralysis on the injured side in the brain. In two good papers on the subject by Bayle†† and Dechambre,‡‡ not more than 10 or 12 cases are pointed out. The 200 I have collected do not include those of Nasse's list (at least most of them), as I have not been able to procure the paper of that learned physician. But it is not the number of such cases that can alone carry conviction. The features of certain cases, or some peculiarity attached to them, will do much more to prove that the paralysis was really due to a lesion on the side of its appearance. The demonstration is, I believe, fully given by the following facts and arguments:—

1st. In a case in which a small bullet (a pistol shot) passed through the whole *right* side of the brain from back to front in the upper part, and at a distance of an inch from the middle line in the occipital bone, and one-third of an inch in the frontal bone, there was at once a paralysis on the same side (the *right*). Eight months after the paralysis was not quite cured. The case has been reported with great care by two Belgian physicians, Drs. Liévens and Demoor.§§ It is impossible to admit that there was anything here but a lesion of the three lobes of the right side of the brain in parts where there is no large bloodvessel and above the lateral ventricle, so that no great effusion of blood can have taken place, and the effused blood cannot have passed from one ventricle into the other.

In a case in which a large mass of medullary cancer involving the *left* parietal bone had made its way outwardly, a pressure upon the tumour "caused temporary loss of power of motion in the *left* arm—that is, the arm of the affected side." Mr. George W. Callender,¶¶ who published this case, has supposed that in cases of paralysis on the side of a lesion in the brain there was a pressure exerted on the opposite side, the paralysis resulting from this pressure. In this case it is clear that a pressure on the tumour, if able at all to act on the right side of the brain, must necessarily have spent almost all its force on the left side, so that the temporary paralysis was evidently due to a lesion on the same side as that where it occurred.

In a very interesting case, published by Scholz, of Bremen,*** a patient was attacked with aphasia, drooping of the *left* upper eyelid, and *left* hemiplegia, and was cured after the issuing of a good deal of pus from inside the cranium, through an opening, on the *left* side of the head at nine centimeters below the sagittal suture and on the coronal suture. An effort has been made to explain this case in admitting that the pressure exerted by the intracranial abscess had produced œdema and anæmia in the opposite side of the brain. It seems wonderful to me that such an idea can have, even for a moment, come to the mind of a surgeon of merit! Is it necessary to show that if the abscess was located near the place of exit of pus it is the left half of the brain alone, or nearly so, which bore the pressure, and that if œdema and anæmia resulted from that pressure, it was in the left half of the brain that they occurred?

In another case it was clear also that the paralysis originated from a lesion on the corresponding side of the brain, as it came in the *right* limbs after a blow on the forehead and the temple on the *right* side; and the autopsy showed that the *right* parietal bone was perforated, and there was a large abscess over the *right* hemisphere.†††

In all the above cases the knowledge during life of a lesion on the side of the paralysis existed, and the connexion between the lesion and the paralysis was so obvious that it seems to me impossible that anyone giving time to the ex-

* I have tried to show elsewhere that paralysis in brain disease—as well as aphasia, anæsthesia, and in many cases also amaurosis—is the result of an inhibitory influence exerted on nerve-cells endowed with the function then lost—by an irritation starting from the part diseased or its neighbourhood. The mechanism of production of the cessation of activity of nerve-cells at a distance from the place where is a lesion in the brain, I consider to be the same as in cases in which paralysis, anæsthesia, aphasia, amaurosis, deafness, &c., are caused and maintained by an irritation of nerves by worms in the bowels.

† A Dictionary of Practical Medicine, 1858, vol. iii., part i., p. 35. The arguments employed by Copland had already been put forward in one of the papers published by the old French Académie de Chirurgie as having deserved a prize in 1760. See Prix de l'Acad. de Chir., nouv. edit.; Paris, 1818, vol. iv., p. 372; paper of Sabouraud.

‡ In the November number of the Archives de Physiologie Norm. et Pathol. I have described as a constant effect of an irritation of the surface of the brain on one side, by a heated iron (the actual cautery), a paralysis of the cervical sympathetic nerve on the same side. The various kinds of paralysis in limbs, the thorax, &c., I intend to describe in the January number of that same periodical.

§ It was in making experiments on the so-called psycho-motor centres that I found the facts briefly mentioned in the text, concerning the effects of burning the surface of the brain. Knowing how powerful an irritant is heat, I thought that if these parts of the brain were what they are supposed to be, a movement would be produced in the limbs on the opposite side at the time of the application of the white-hot iron on these so-called centres: *no trace of movement appeared in any of my numerous experiments.*

‖ Traité des Lésions de la Tête par Contre-coup; nouv. ed.; Paris, 1874; pp. 7, 48, 53, 78, 92, 103, 162, and 259.

¶ Vom Bane und Leben des Gehirns, Bd. iii.; Leipzig, 1836; p. 370.

** Zeitschrift für Psychiatrie, 1469.

†† Revue Médicale, Janvier, 1824.

‡‡ Bulletin Clinique; Paris, 1835, vol. i., p. 111.

§§ Gazette Médicale de Paris, 1844, p. 695.

¶¶ St. Bartholomew's Hospital Reports, vol. iii., 1867, case xiii., p. 434-5.

*** Revue des Sciences Médicales; Paris, 1873; vol. i., p. 603.

††† Lépine, of Chalons, in Annales Médico-Psycholog., 1844; vol. iii., p. 129.

amination of these cases can suppose that an *unseen lesion* in the hemisphere of the brain on the opposite side to that of the paralysis was the real cause of this loss of movement.

*(To be continued.)*

# A Lecture
ON
# MAN IN HIS ANATOMICAL, PHYSICAL, AND PHYSIOLOGICAL ASPECTS.

*Introductory to a Course of Lectures on the Institutes of Medicine (Physiology).*

BY J. BELL PETTIGREW, M.D., F.R.S., &c.,
PROFESSOR OF MEDICINE AND ANATOMY IN THE UNIVERSITY OF ST. ANDREWS.

GENTLEMEN,—In entering on my duties as Professor of Medicine and Anatomy in your ancient and honourable University, it is incumbent on me to pay a passing tribute to the memory of my distinguished predecessor, the lamented Dr. Oswald Home Bell.

It was my misfortune to know Dr. Bell very slightly, but the little I did know was of the most favourable tenor. He appeared to me to be a man of rare judgment, tact, and industry. He was admittedly conscientious and honourable, but he was more; he was a typically kind and generous man—a man of broad, charitable views. Higher praise can be accorded to no one. As most of you are aware, Dr. Bell had a distinguished University career. He put forth flowers which promised abundant fruit. Had he lived, and had he chosen to devote himself to science instead of practice, for which he had a rare genius, there can be no doubt that he would have attained to high academical distinction. As it was, he worked indefatigably for the good of others, and suffering humanity, I am told, never appealed to him in vain. His career, though brief, was eminently useful, and it is distressing to think that one so universally beloved should have been removed so young. Of him it might truly be said, he was "active in business and fervent in spirit." He has left innumerable friends, and, it would appear, no enemies. As his life so was his death, full of earnestness and truth. Those who knew him best mourn him the most, and there are, I feel, none present who will not join me when I repeat the few last mournful words, *Requiescat in pace.*

I could have wished to say more, but after the touching eulogium passed upon Dr. Bell by our distinguished Principal, in his opening address, further remarks from me must appear superfluous. I will therefore turn to my introductory lecture. The subject I am called upon to teach is so vast that I have had considerable difficulty in selecting a topic. This difficulty has been increased from a feeling that on the present occasion I would be addressing, not a body of medical men, but a body of philosophers, scholars, and literati. I have, on reflection, chosen a theme which I hope may possess a general interest even to the non-professional —viz., *Man in his Anatomical, Physical, and Physiological Aspects.*

It has been truly said that the study of mankind is man, and I am free to confess that I know of no nobler study, if it be pursued, as it ought to be, in a liberal and strictly scientific spirit.

Of all created beings man unquestionably occupies the first place. He is god-like as to form, divine as to intelligence. He may be said to constitute the last link in creation. In point of time he was the last to be created; but, being created, everything endowed with life was made subject to him. He forms, as it were, the last of an indefinite series, and in this respect is to be regarded as in some measure intermediate between the other members of the animal kingdom and his Maker. "And God said, Let us make man in our image, after our likeness; and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth."* Not only was man the last to be created, but very considerable preparation was necessary before he could take his place in nature. This is evident alike from the sacred writings and from geological records. The geological argument has been stated with great force by Sir Humphry Davy as follows:—"In those strata which are deepest, and which must, consequently, be supposed to be the earliest deposited, forms even of vegetable life are rare; shells and vegetable remains are found in the next order; the bones of fishes and oviparous reptiles exist in the following class; the remains of birds, with those of the same genera mentioned before, in those of the next order; those of quadrupeds of extinct species in a still more recent class; and it is only in the loose and slightly consolidated strata of gravel and sand, and which are usually called Diluvial formations, that the remains of animals such as now people the globe are found, with others belonging to extinct species. But, in none of those formations, whether called secondary, tertiary, or diluvial, have the remains of man, or any of his works, been discovered; and whoever dwells on this subject must be convinced that the present order of things, and the comparatively recent existence of man as the master of the globe, is as certain as the destruction of a former and a different order, and the extinction of a number of living forms which have no types in being."†

Sir Charles Lyell writes in a very similar strain. He observes:—"We have been fairly led by palæontological researches to the conclusion that the invertebrate animals flourished before the vertebrate, and that in the latter class fishes, reptiles, birds, and mammalia made their appearance in chronological order analogous to that in which they would be arranged zoologically according to an advancing scale of perfection in their organisation. ..... To crown the whole, the series ends with the Arencephala, of which man is the sole representative."‡

It is customary to speak of man as the lord of the creation, nor can this lofty title be well denied him since revelation and science equally support it. He is mentally and physically fitted for command. It is not my intention, however, on the present occasion to speak of intellectual man. As your Professor of Medicine and Anatomy, I shall best occupy your time by regarding him from a corporeal or bodily point. While claiming for man the first place in creation, I am not one of those who seek to elevate man by depressing the lower animals. All are perfect after a fashion. To argue otherwise would be to attribute imperfection to the Deity. Man has very many points in common with the brutes that perish, not only physically but mentally; and so far from denying those points of analogy, affinity, and it may be of actual consanguinity, I am proud to think that God in his great goodness has surrounded us with so many beautiful creatures, not a few of them having even beautiful dispositions. Granting, however, that man is, as to his animality, not far removed from the highest of the lower animals, and that he possesses certain mental traits in common with them, I still maintain that he is *facile princeps*, and that there is a great gulf between him and his congeners which science has hitherto failed to bridge. The gulf is chiefly an intellectual gulf, for it cannot be doubted that there is a greater chasm between man and the higher apes, as regards intelligence, than there is between the several kinds of apes and the organic forms immediately below them. "When it is said that the human race is of far higher dignity than were any pre-existing beings on the earth, it is the intellectual and moral attributes of our race, rather than the physical, which are considered; and it is by no means clear that the organisation of man is such as would confer a decided pre-eminence upon him, if, in place of his reasoning powers, he was merely provided with such instincts as are possessed by the lower animals.....Linnæus declared that he could not distinguish man generically from the ape, and Professor Owen has spoken of the 'all-pervading similitude of structure—every tooth, every bone, being strictly homologous,'—yet the same great anatomist considers man's superior cerebral development as entitling him to be placed in a sub-class apart from all the other mammalia."

* Genesis i. 26.
† Sir H. Davy: Consolations in Travel, Dialogue iii., "The Unknown."
‡ Principles of Zoology, 10th ed., vol. i., p. 165. London, 1867.

It has been customary of late years to draw animals in all sorts of fanciful positions, and to give them interesting expressions. This has been especially the case with the anthropomorphous apes. Thus the orang-utan, chimpanzee, and gorilla have been ingeniously represented in semi-erect positions, and grinning as only apes can grin. The naturalists, however, have failed to convince the majority of mankind that man is the immediate descendant of the gorilla. Animals undoubtedly have expression, but the erect posture and the wonderful play of features indicative of an almost divine intelligence are, to a great extent, peculiar to man. He is the only creature who can be said habitually to maintain an erect attitude, and who can laugh, cry, and speak. Certainly there is no known animal which can use its hands to such purpose, and between whose head and hands there is such perfect co-ordination. If man, as Darwin and others try to make out, is actually descended from the lower animals by infinite transmutations in infinite time, the supporters of that view (and it is a great, grand, and original view) must admit, that they have hitherto failed to find the missing link. To prove this theory, an animal approaching man much more closely than the orang-utan, chimpanzee, and gorilla must be found living or dead. No such animal, however, can be discovered. The solitudes of tropical forests and the vast recesses of an expectant geology have hitherto been searched in vain. While, however, there is admittedly a missing link, it becomes us to bear with the evolutionists—those patient, earnest, indefatigable workers. They are engaged in a mighty undertaking, and until their labours are completed no verdict can be given. Let us, as scientific men, be liberal. Let us agree to differ. It is truth that is sought, not self-aggrandisement. There can be no science where there is dogmatism. Liberty of thought and action is the birthright of every original inquirer, and everyone who attempts to stifle this is a mere cumberer in the field he pretends to cultivate.

If the evolutionists accomplish no more, they have already accomplished much; they have shown us that from protoplasmic albuminous-looking masses rudimentary animals may be developed, and that, step by step, in endless succession and in infinite time, a graduated series of organic forms may be evolved; each member of the series dovetailing into that immediately above and immediately below it. They have thrown much light upon the complicated questions of natural affinity, the homologies of organs in various animals, and the recurrence in the embryos of the higher animals of structural peculiarities found in the lower ones. They have connected, as by a silver thread, the various palæontological forms in time, and the several faunas and floras in space. They have endeavoured to establish an actual genealogy and consanguinity of organisms.

The evolutionists begin with the lowest and end with the highest. This system may be fitly represented by a chain. They say, given the first link, living protoplasm, in the shape of an amœba or some degraded type, we may have a second link representing a higher living form, and so on until man himself is reached. You cannot, however, say they, have the highest type without the lowest, and the presence of the highest and lowest types indicates the existence, past or present, of intermediate types. There is, therefore, in evolution a similarity and a sequence. The evolutionists appear to me to err rather in their premises than their conclusions. They crave one or more living types developing into myriad living forms, and infinite time for their transformation. Their argument is virtually a *petitio principii*. If it takes a million years to form a man from a mollusc, then it is quite evident that no man or generation of men can hope to see the transformations as they occur. They can see and recognise species when created, but they cannot see the actual creations as they occur. In short, they can see the perfect chain, but not the process of link-making. If we take man as an example, we know from ancient sculptures and mummy pits that his form has not varied, even in the slightest, for several thousand years. The same may be said of many domesticated plants and animals, as, for instance, Egyptian wheat and the sacred animals of the Nile. The evolutionists, however, look upon a thousand years as a small matter in the transformation of living forms, and this element of time forms, it appears to me, at once the strength and weakness of their position. The evolutionists represent the Creator not as a being whose work is finished, but whose work is progressing. They regard the world and all it contains as a vast panorama which moves continually.

"When first the doctrine of the origin of species by transmutation was proposed, it was objected that such a theory substituted a material self-adjusting machinery for a supreme Creative Intelligence. But the more the idea of a slow and insensible change from lower to higher organisms, brought about in the course of millions of generations, according to a preconceived plan, has become familiar to men's minds, the more conscious have they become that the amount of power, wisdom, design, or forethought, required for such a general evolution of life, is as great as that which is implied by a multitude of separate, special, and miraculous acts of creation."

The evolutionists are not to be confounded with the advocates of spontaneous generation. These latter deal with a still wider question, for they maintain that neither living protoplasm nor a living type is required to begin the animal series. They regard life as an accidental result, due to an accidental assemblage of dead particles under favourable circumstances. They say, given certain matters and certain conditions, such as heat, light, moisture, &c., and life will inevitably result. They require no parent or germ; theirs is life *de novo*.

Whatever man's descent, whether the offspring in a remote antiquity of stray particles deftly arranged by physical forces, or an evolution of living matter acted upon by vital and physical forces, or a separate creation in which he appeared perfect as he is when fresh from the hands of his Creator, matters little, if we regard him from a merely anatomical, physical, or physiological point. It is the duty of the anatomist, physicist, and physiologist to look upon man simply as an organism—i.e., an assemblage of organs or parts, each of which has a definite function to perform. Regarded as an organism he still stands at the head of the animated kingdom. In man we behold the highest degree of differentiation. In him there is a greater number of parts, and the parts are more divinely attuned. It may be as well at this stage briefly to explain what is meant by differentiation. In the lowest plants and animals the individual consists of a single cell—i.e., a globular, jelly-like, protoplasmic mass, invested with a more or less perfect envelope. This cell is endowed with wonderful vital properties, for it lives, grows, and reproduces itself. All its parts, however, are homogeneous; in other words, each part resembles every other part. The cell, or cell-plant, or cell-animal, as happens, is therefore said to be undifferentiated. As we rise in the scale of being, the cells in plants and animals break up, coalesce and interweave to form organs; each organ consisting of heterogeneous parts arranged according to a given plan, and performing a definite function. Thus, in plants and animals there are the respiratory and reproductive organs—i.e., portions of the plant or animal especially set apart for respiration and reproduction. The eye is regarded as the organ of sight, the ear of hearing, and so on. The parts or organs increase as we ascend from the lowest to the highest forms; and a plant or animal is said to be differentiated according to the number of organs composing it, and the complexity and variety of the functions performed by those organs. An organism is necessarily composed of parts, and the higher organisms are to be regarded as the aggregation of organs, all of which are more or less complex. Man, then, regarded as an organism—i.e., an assemblage of parts variously constituted and performing various functions,—is the most highly differentiated of all living beings.

As it is impossible to speak of an organism as apart from its organs, so it is impossible to speak of an organ as apart from the matter composing it. It is necessary therefore, even at the risk of being tedious, to say a few words regarding organic and inorganic matter, and vital and physical force. As anatomists, physicists, and physiologists, we cannot escape from matter; neither can we escape from the forces which actuate that matter as such. All living things proceed directly or indirectly from the material universe. There we find a store of matter and a store of force which are virtually inexhaustible; all the more inexhaustible because the matter and force of the universe are indestructible. We cannot annihilate matter, neither can we annihilate force. We can change the form of the matter and the direction of the force, but here our powers cease. If

matter and force are taken from the universe to build up a plant or an animal, they both return to it when the plant or animal dies. The universe is not only the great laboratory where everything living is fashioned; it is also the vast lumber-room where everything dead is stored. It is the huge magazine of extinct or geologic forms. The organic rises out of the inorganic, and returns to it. We cannot speak of even the lowest plant or animal, still less of man, without referring to the matter of the universe.

By organic matter is meant matter as it exists in living plants and animals, or in plants and animals that have once lived; by inorganic matter is to be understood matter as it exists outside plants and animals—i.e., in the mineral kingdom.* By vital force is meant force as manifested in living forms; by physical force, force as it exists in the universe as a whole. The vital forces prevail in life, the physical ones in death. The play of matter and force is seen to perfection in the formation, growth, and death of plants and animals. Mineral matters and physical forces, in the natural order of things, precede vegetable matters and vital forces, and vegetable matters and vital forces precede animal matters and mental forces. Thus to form and support a plant we must have mineral substances and vital and physical forces; and to form and support an animal we must have vital and physical forces and mineral substances *plus* plants. An animal can only exist through the plant; it cannot live upon inorganic substances. The plant alone possesses that vital or vito-chemical laboratory which can assimilate inorganic materials, and convert them into food for itself and for animals. Plants are the great producers in nature, animals the great consumers. The elements enter the bodies of animals by a somewhat circuitous route. Animals feed upon plants, and plants upon inorganic matter obtained from the soil and air. Animals for the most part obtain their elements indirectly from the plant or other animals. The plant precedes the animal in the same way that inorganic matter precedes the plant. The elements, as it were, circulate within plants and animals. Thus vegetables absorb from the earth and air carbonic acid, watery vapour, and nitrogen; they give off oxygen, and retain carbon and hydrogen. Vegetables build up organic matter under the influence of solar heat and form the food of animals; but the animals thus formed return to the soil and the atmosphere the materials supplied by plants, either during their lives or at their deaths. Animals give off what plants retain—viz., carbonic acid, hydrogen as a constituent of water, and free nitrogen in the form of ammonium oxide. The animal kingdom is to be regarded as an apparatus of combustion, the vegetable kingdom as one of reduction. The metamorphosis which certain of the elements undergo in plants and animals may be briefly stated:—"Rain water, loaded with the carbonic acid of the air, falls upon calcareous hills, and carbonate of lime in a state of solution enters rivers, and is by them carried to the ocean, where it is seized upon by millions of animals, and converted into their external skeletons or shells. The water of rivers and springs also is absorbed by plants, and drunk by animals, and so lime enters into their substance, and is converted into various salts of that base, such as oxalates, tartrates, phosphates, &c. Phosphate of lime is the principal element of the bones, besides entering more or less into the constitution of the other tissues of the superior animals, which are continually excreting as well as assimilating it. Lastly, on their death, the lime is dispersed in various ways; even the bones crumble to pieces, and so the mineral returns to the soil from whence it came. Sulphur passes from one region to another, in a similar manner—from the sea, which contains sulphur in large quantities, to the atmosphere, thence to the soil, and thence to plants and animals, from whence again it returns to the bosom of the ocean. These incessant changes between the soil or atmosphere, plants and animals, constitute the theory known as the chemical balance of organic nature."†

In all these beautiful transformations we have marked evidence of design. The mineral kingdom is necessary to the vegetable kingdom, and the vegetable kingdom to the animal kingdom. Some, indeed, even go the length of saying that it is impossible to draw a line of demarcation between the mineral and vegetable kingdoms on the one hand, and between the vegetable and animal kingdoms on the other, and that in reality there is but one kingdom, which embraces all three. These philosophers look upon *all matter as one* and *all force as one*. Thus Tyndall remarks that "everywhere throughout our planet we notice a tendency of the ultimate particles of matter to run into symmetric forms. The very molecules appear inspired with a desire for union and growth, and the question of questions at the present day is, How far does this wondrous display of molecular force extend? Does it give us the movement of the sap of trees? I reply with confidence, Assuredly it does. Does it give us the beating of our own breasts, the warmth of our own bodies, the circulation of our own blood and all that thereon depends?.....You can pass on by almost imperceptible gradations from this wonderful display of force.....to the lowest forms of vegetable life. I pass from them to other forms higher, and so up to the highest..... One class of thinkers suppose that all the actions of crystals, that the passage from crystalline action to the lowest forms of vegetable life, and from them to the higher forms still, and so on to the highest,—I say, one class of thinkers regard this as the growth of a single natural process. They grasp, as it were, this act of life, this development of life, as an indissolubly connected whole—one great organic growth from the beginning. Others again say that it is not possible to pass from inorganic, as we are pleased to call it—for remember it is only human language we can use,—from the inorganic to the organic without a distinct creative act, and so with regard to the forms we observe."

It will no doubt appear to many, if not to all, far-fetched to speak of man as a direct evolution from inorganic matter by an elaborate and complicated series of transformations, but as this is the view adopted by many advanced thinkers of the present day, I feel it incumbent on me to state it.

*(To be concluded.)*

* Water, chloride of sodium, chloride of potassa, carbonate of potassa, carbonate of lime, &c., are examples of inorganic substances; starch, sugar, fats, fibrin, albumen, casein, pepsine, &c., of organic ones.

† Outlines of Physiology, by J. Hughes Bennett, M.D., F.R.S.E., &c., p. 7. 1872.

NOTES ON

## THE ADMINISTRATION OF ALCOHOL IN THE TREATMENT OF DISEASE.

BY BENJAMIN W. RICHARDSON, M.D., F.R.S.

I CANNOT, I think, begin the work of the new year more usefully than by recording a few observations on the employment of alcohol in the treatment of disease.

In the earliest part of my professional career—twenty-five to thirty years ago,—the lessons taught in the English and Scottish schools were very simple and, admitting the premises on which they were based, sound. They were the continuation of a wave of the Brunonian theory, though the name of the theory and much of its curious history had become entirely forgotten. The value of alcohol was thought to lie in its power of sustaining the animal body during "asthenic" states, and of saving the body from exhaustion of its "excitability." Alcohol, therefore, was administered, with moderate freedom, in cases of general dyspeptic debility; of hæmorrhages; of fever, when the pulse was failing in power; of syncope; of shock; of exhaustion from a discharge from the body, as from an abscess, or from free secretion of milk in the woman; of depression from severe inflammatory states, as in carbuncle or erysipelas; of melancholic, depressed, and nervous states of mind; of phthisis pulmonalis; of hysteria; of delirium tremens; of paralysis. It was administered in all cases in which it was considered that the patient would be likely to sink, or in which the patient was thought to be actually sinking into death. The universality of the remedy, as an aid to substances more purely medicinal, was, in fact, admitted by nearly every practitioner.

A little later, the employment of alcohol in medicine became, I will not say more systematic, but more extended. The teachings of Dr. Todd led many practitioners to "rely,"

as they expressed it, on alcohol, to the exclusion, in some instances, of all other active treatment. For my part, I was never drawn into the practice of this extreme school; but for more than twenty years I held by those lessons which I originally learned from my first masters.

Within the past six or seven years a change has come over the medical world in respect to the value of alcohol as a remedy. This change is due to the new light that has been thrown upon the subject of the physiological action of alcohol. I do not now enter on the physiological question. It is sufficient for me to say that, without any kind of prejudice against alcohol as a remedy, with indeed some prejudice in its favour, I have felt it a duty to study its medicinal action in a more critical spirit than I did originally, and that the result is a correction of many errors of grave import. Thus I have learned a series of new truths and practices in the treatment of disease which I would submit as being worthy the consideration of those who have not yet arrived at the same conclusions.

To some of the changes of practice I have been led solely by physiological guidance; to some by the process of following and testing the practice of other physicians who have ventured to move in steady advance in the path of clinical research.

Of the new facts which I have, so far, learned from new observation, the following are the most important.

I.

There are cases, commonly called cases of debility, in which there is no objective sign of organic disease. The leading symptoms are those of persistent dyspepsia; flatulency; irregular action of the bowels; hæmorrhoids; much exhaustion under moderate physical exertion, and great mental depression under slight mental disturbances; extreme nervous excitability, amounting to hysterical excitement; a condition of urine variable in character, the fluid sometimes of straw colour and abundant, at other times scanty and loaded with lithates; the sleep disturbed, with frequent movements and muscular starts of the lower limbs at the moment of going to sleep; a deficient appetite, and a white loaded tongue. In these examples—as common, by the way, to-day as in former times—the old practice used to consist in trying "to regulate" the wine or other alcoholic beverage. My experience now is that these symptoms are in nearly every instance caused by alcohol, and that the only certain successful treatment is total abstinence. To the practical conclusion here stated I have been led by the study of the action of alcohol upon the healthy body. The phenomena described are the symptoms of alcohol when it is taken in what is commonly presumed to be a moderate, and, as it has seemed to many, a necessary quantity. These phenomena and their cause have been very carefully and ably described by Dr. Marcet.

II.

That alcoholic stimulation was the first point of practice in the treatment of acute hæmorrhage was a lesson of all others most impressed on my student life. For many years I held by it, as a matter of faith, so strongly, that if in a fatal case of hæmorrhage I had been obliged to withhold the stimulant I should have looked back upon the proceeding with sincere regret. At the same time some striking facts were occasionally presented to me, which startled me at the time, and which would have taught to a mind less forcibly impressed with a preconceived idea a new experience. I was called at night to see a weak and emaciated woman who had been attended by a midwife, and who had been flooding for several hours, owing to retained adherent placenta. The woman was semi-conscious, occasionally feebly convulsed, and cold, from the loss of blood. If wine, sherry or port, had been at hand, I should have given her half a bottle at least, or any other form of alcohol in like proportion; but there was not a drop of alcoholic drink in the house, and the house was some miles from a village, so I was obliged to get on without the stimulant. I extracted the placenta, kept up firm pressure on the uterus with the hand, and administered freely the only sustenance that could be had—viz., milk diluted with water and sweetened with sugar. The hæmorrhage stayed, the patient fell into a sleep, and I left her in the early morning comparatively safe. At a visit later in the day she was in a condition as favourable as I had ever seen for recovery under like circumstances, and she actually recovered as quickly as could be imagined possible, without taking a single dose of alcohol. This recovery was backed by many others; by the recoveries from exhaustion after venesection without administration of alcohol; by the recoveries of the inferior animals from hæmorrhages carried up even to apparent death. They did not teach me anything more than a list of curious exceptions from an imaginary rule.

Meanwhile it was impossible to be blind to another set of facts—namely, that the alcoholic remedy for hæmorrhage, potent as it might be, was not without its disadvantages. It caused generally a reaction more or less troublesome; and sometimes, during the reaction, hæmorrhage recurred. It caused often an extreme, restless nervousness of the patient. It deranged the secretions. It lessened the appetite for sustaining foods, and it led thereupon to an exhaustive, feverish condition,—famine fever,—which was not satisfactory. Lastly, it was by no means so invariably successful a remedy as might be desired and expected. These drawbacks, however, pertain to many remedies; indeed, not one remedy is certain, not one perfect. Alcohol therefore, like the rest, must be accepted with all its imperfections on its head.

Gradually, under the light granted by physiological research, I began to discover that alcohol was clearly objectionable as a remedy for hæmorrhage. To check the loss of blood from open vessels something is wanted that will either produce rapid coagulation of blood, or that will cause contraction of the bleeding vessels. To push alcohol generally to the extent of causing coagulation of blood in the bleeding part were to push it to the extent of causing coagulation of blood within the heart, a feat not exactly to be desired even for the arrest of a hæmorrhage. It does not therefore answer for the first purpose. To push alcohol so as to make it act on the vascular tension was, I found, to push an agent which relaxed the vessels and let them more easily give forth their blood. It does not therefore answer for the second purpose. Alcohol has another effect, which, up to a certain degree, may be useful in cases of loss of blood, but which carried a very little further than is useful is injurious. I mean the effect it exerts over the heart. Under the action of alcohol the stroke of the heart is quickened, and thus in the moments when the impelling, or what we at present call the impelling, force of the heart is low, an increased movement is produced which may possibly be temporarily restorative. Unfortunately, it is necessary to keep up the quickened action by giving more of the restorative, and if the over-action induced be uncontrolled, it becomes hurtful; it prevents in the bleeding surface that stasis of blood which is so necessary to ensure a firm clot, and it keeps up an excitability of the brain and of the nervous system generally which is opposed to recovery.

The consideration of these facts led me to question the propriety of administering alcohol for the cure of hæmorrhage. The doubt, suggested by reasonings resting on physiological observation, was before long tested in practice.

I was asked to visit a lady who for many hours had been suffering from hæmorrhage after the extraction of a tooth. I found that the cavity of the tooth from which the blood flowed had been several times firmly plugged with cotton saturated in a solution of perchloride of iron. By this means the bleeding had for a period been stanched, but it as constantly recurred, forcing out the plug. During the time brandy had been frequently administered, in order, as it was assumed, to keep going a heart which flagged speedily when the stimulant was long withheld. I found the patient scared, prostrate, and restless; the action of her heart rapid and feeble; the bleeding from the cavity free. When I attempted to examine the mouth she vomited, throwing up some blood that she had swallowed, with fluid matter—a part of the last drink she had taken. After this she became faint, and I then succeeded in filling the cavity with styptic colloid on cotton-wool, plugging firmly from the bottom of the cavity, particle on particle, as a dentist stops a tooth with gold. The hæmorrhage once more stopped. I insisted on the withdrawal of all stimulant. I placed the patient recumbent, got her to swallow slowly a good draught of warm milk containing a little lime-water, and allowed her to recover from the faintness without any enforced reaction. The result was all that could be

desired. The hæmorrhage did not return, and when the plug came away a few days later there was a firm healing surface beneath. The strength of the patient was rapidly restored.

From this time onwards I have substituted warm milk for alcohol in every case of hæmorrhage I have been called to treat, and I am satisfied that the new treatment is safest and soundest. I give one more illustrative example because of the extreme character of the symptoms.

I was called urgently in the night to meet my friend, Mr. Milson, of St. John's-wood, in the case of a gentleman who was bleeding profusely from the roof of the mouth. The patient was suffering from specific disease affecting the palate and superior maxillary bones; the bony part of the roof of the mouth was, indeed, a necrosed shell. Through an opening in this dead bone, arterial blood began suddenly to pour, and by the time that we arrived five pints of blood, as I found by after measurement, had been passed into one basin, while much more had been lost which could not be measured. We lifted the fainting man from his bed on to a couch so as to get at the mouth more readily, and we at once firmly plugged with styptic colloid and cotton-wool, after passing styptic ether, by the spray tube, freely into the bleeding cavity. In this manner we stanched the bleeding completely. We gave the patient warm milk, but no stimulant. At this juncture we had the advantage, and what is always an unqualified pleasure, of a consultation with Mr. (now Sir) James Paget. He advised that our firm plug should be left in its place, and he independently and earnestly supported our practice of withholding alcohol. Four days later, owing to the separation of the plug, the hæmorrhage recurred as profusely as before, and a new plug would not hold. I therefore, *in extremis*, cut round the margin of dead bone with a dentist's saw, and turned out the necrosed structure altogether. Then we were able to see and secure by torsion two bleeding arteries—anterior palatine or branches from them,—and by further use of styptic spray and plug again stanched the bleeding, this time for good, but not until a further loss of at least from five to six pints had been sustained. We followed once more the plan of feeding with milk and of withholding alcohol altogether, and with a success that was without a check. The symptoms of fever, of reaction, of dyspepsia, of nervous restlessness, of sleeplessness, were all saved; the wound healed soundly, and the return of strength progressed rapidly to perfect recovery.

*(To be continued.)*

## ON A PECULIAR APPEARANCE OF THE CONJUNCTIVA IN SOME CASES OF NIGHT-BLINDNESS.

BY SIMEON SNELL, M.R.C.S. ENG.,
SURGEON TO THE SHEFFIELD EYE DISPENSARY.

MY attention, during the last two years, has been directed to an appearance of the conjunctiva occurring in several cases of night-blindness, which, so far as I have been able to ascertain, does not seem to have been hitherto described; I trust, therefore, that a short account of some of the cases may not be considered altogether uninteresting.

Walter D——, four years of age, was brought by his mother to me at the Eye Dispensary on June 13th, 1874. She stated that ten days or a fortnight previously, when out with him one evening, as it was beginning to get dark, she noticed he could not distinguish between the road and the foot-path, so that he kept slipping off the causeway, but was always better when he came near the gas-lamps. At the time of his coming to me he was unable, as evening set in, to recognise even his mother only a few feet distant. He was a hearty, strong-looking boy, and had always been so. His parents also appeared healthy. The pupils of both eyes were somewhat dilated. The ophthalmoscope yielded merely negative results: no deposit of pigment in retina nor diminution of its arteries. In the conjunctiva, however, at a short distance from the cornea on either side, was a small, glistening, greyish, and somewhat square-shaped patch. It apparently consisted of a number of minute bubbles, freely moving with the conjunctiva, and which were easily dispersed on pressure, but always reappeared after a variable period of some hours. These patches were more marked on the temporal side of either eye. He was ordered cod-liver oil and steel. On July 11th the mother reports him as "quite recovered. He sees perfectly well at night now, and the conjunctival patches are entirely gone." I saw this little boy two or three months ago, and found that he had continued well, having had no recurrence of the night blindness.

Hugh S——, aged seven, came under my care May 15th, 1875. He had been observed not to see well at night for a fortnight, when his father had him in the garden at dusk, and instead of keeping to the ordinary path, the boy was walking into a deep pond. In many other ways also his inability to see well at night had been noticed. Both pupils were moderately dilated. The ophthalmoscope disclosed nothing abnormal in the fundi oculorum. Patches similar to the last case, only larger, were found in the conjunctivæ of both eyes, disappearing also on pressure, and more developed on the temporal side. This was the second attack. Last year at the same time he was under observation. The patches in the conjunctivæ were then much more marked, and it was on account of having noticed them that his mother brought him for advice. On being questioned, the presence of hemeralopia was easily and clearly established. The patches then were triangular in shape, with their bases turned towards the cornea, and occupying the space between the lids. He recovered, and was well up to the present attack a fortnight ago. He was now ordered cod-liver oil and steel. His mother, however, taking him away for change of air, he did not make his appearance for some time, but when seen at the end of July was entirely recovered, the conjunctival patches having disappeared as his vision at night improved.

The following interesting family were under the care of my colleague, Mr. Gillott, with whom I examined them, and to whom I am indebted for permission to make use of them. For some time, and in several cases, he has noticed this condition of conjunctiva.

Mrs. G—— brought her little boy J., aged six, in March, 1875, on account of his inability to see properly, and for stumbling over things at night. He had been similarly attacked last year. The conjunctivæ presented patches like the preceding cases, but instead of there being two in either eye there was but one, and situated at the outer side. She said that her other children were similarly affected as night approached, and noticing on going home patches on their eyes like those in the boy J., she brought them all at her next visit. There were two boys and two girls, besides a baby in arms who was quite well, making in all, with the boy J. previously mentioned, five suffering from hemeralopia. Their ages were, W., ten years; E., eight years; J., six, similarly attacked last year; H., four years; F., three years. With the exception of J. none had so suffered before. All presented conjunctival patches like the cases before described, disappearing on pressure; but in each eye there was only one patch, and that on the temporal side. The mother, a very intelligent woman, gave satisfactory evidence as to the presence of hemeralopia in each of them. The pupils in every case were moderately dilated. Ophthalmoscopic examination disclosed nothing abnormal, except in one or two, where we thought the retinal vessels looked a trifle veiled, as if there were some small amount of retinal effusion. Towards the end of May they had all perfectly recovered. The conjunctival patches had entirely disappeared. They were as healthy-looking and rosy-cheeked children as one would find in any family.

These cases will suffice, without mentioning others, to illustrate the conjunctival appearance spoken of. None of the cases above described presented any marked changes in the fundus oculi; for although in one or two we thought there appeared some veiling of the vessels, it was so slight as to be doubtful. Certainly none exhibited the amount of retinal haze, dilatation, and tortuosity of veins mentioned by Quaglino* as constantly seen in cases of acute (simple) hemeralopia. There was, however, the dilatation of pupil and tendency to recurrence often described. As to the peculiar appearance of the conjunctiva, I have never seen the like in any other condition than hemeralopia, and, since my attention has been directed to it, have found it in every

* Hemeralopia, by Quaglino. (Ophthalmic Review, Oct. 1868.)

case of simple hemeralopia which has come under my observation; all of which, however, have been children. The *patches* appear to commence with the disorder, and to disappear as vision at night improves. Quaglino, in the paper before referred to, states that "there is no external alteration of the ocular membranes, except some varicose subconjunctival vessels, deficient brilliancy and liveliness of the cornea." On the other hand, Bitot* describes a pustular condition round the cornea in an epidemic he witnessed, and which he thought pathognomonic of the disorder. Netter,† however, who had observed the same epidemic, was not of that opinion. Mr. Soelberg Well‡ also, who has noticed a similar appearance in cases of night-blindness caused by exposure to the burning sun of the tropics, thinks it only a "thickening and desiccation of the conjunctival epithelium from exposure to intense heat." The cases I have briefly detailed had not been exposed to any great heat, and, as I understand it, the appearance I have described is different from that mentioned by the writers referred to. In these cases the epithelium did not appear thickened, nor was there any pustular eruption; but there were what seemed like tiny bubbles, which dispersed on being pressed.

The cause of the hemeralopia in these cases appears very uncertain. They were all the children of healthy and, apparently, strong parents, who were of the better artisan class, who lived comfortably, and no doubt their children were well fed and well attended to. An interesting point is, that all the children mentioned here came from one large district of Sheffield; which, however, is loftily situated, and is, I believe, generally considered healthy. Other cases have come before me from quite a different locality.

Sheffield.

## ON OVERWORK.

By ROBERT FARQUHARSON, M.D.,

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To hit off the happy medium between over- and under-work is no easy task even to those who have the necessary knowledge, on the one hand, and the liberty to arrange their own scheme of occupation, on the other. But for one person who is injured by doing too much, I quite believe with Dr. Wilks that many may be found who are sustaining serious damage from not having enough mental stimulus. The listless vacuity in which so many of the well-to-do classes spend their lives, the want of any incentive to exertion, and the absence of any attempt at real thought which the widespread prevalence of ready-made opinions in our periodical literature directly encourages, must cause more or less degeneration of intellectual power. Under these conditions the brain gradually loses its healthy tone, and although quite equal to the daily calls of a routine and uneventful existence, it is unable to withstand the strain of special sudden emergency, and when a heavy load of work is unexpectedly thrown upon it in its unprepared state, then we see all the worst consequences of what may be called overwork develop themselves. It is no uncommon experience to meet with cases in which damage has been done to the bodily constitution by indulging too recklessly in athletic exercises and active physical exertion when the muscles have become flabby and feeble from disuse. A man accustomed to sedentary pursuits takes suddenly to boating or running, or the horizontal bar, and, if he escapes straining his heart, he is certain to make himself stiff and uncomfortable. Or he has been told that there is nothing like Switzerland for reviving the faded Londoner, so, without the slightest attempt at preparation, he devotes himself enthusiastically to climbing ice-peaks and traversing snow passes; and, when his brief holiday is over, he comes back, worn and jaded, and astonished to find that the glacier air, which has proved so beneficial to many, has done nothing for him.

Now the fault here lies in the want of proper preliminary training. Even as we do not prescribe quinine as a tonic until we have ascertained that the digestive functions of our patient are in good working order, so it is most improper for anyone to attempt active muscular exertion without bracing up the previously unused muscles by carefully graduated exercise. And in mental operations the same analogy holds good. If the brain is not habituated to the constant gymnastic influence of steady work, it is liable to give way or suffer more or less injury from any sudden and spasmodic effort. If, on the other hand, however, its healthy nutrition is ensured by the free supply of pure blood and the due balance between destruction and repair, we shall find ourselves in possession of an organ which will bear almost any amount of steady strain, so long as certain conditions are fulfilled. So long as a brain-worker is able to sleep well, to eat well, and to take a fair proportion of out-door exercise, it may safely be said that it is not necessary to impose any special limits on the actual number of hours which he devotes to his labours. But when what is generally known as worry steps in to complicate matters, when cares connected with family arrangements, or with those numerous personal details which we can seldom escape, intervene, or when the daily occupation of life is in itself a fertile source of anxiety, then we find one or other of these three safeguards broken down. Probably the man of business or the successful advocate cannot shake himself free from his business thoughts at night. Slumber becomes fitful and disturbed. The sympathetic system, unsettled by the mental strain, brings about various defects in nutrition; the appetite fails, and the vigour of the nervous tissues is no longer able to withstand the endless round; and then we meet with the sleeplessness, the dyspepsia, the irresolution, the irritability, and the depression which are among the chief miseries of those whom we are in the habit of saying are overworked.

Now, THE LANCET has lately laid before its readers some interesting statements which would lead us to believe that damage is being done to many boys in preparatory schools by the strong competition imposed upon them by the entrance examination to the larger institutions, and by the ambition of their masters, who hope to derive profit and honour from their success. This is indeed a serious consideration, and the possibility of a large section of our most promising lads being thus mentally stunted in early life would demand instant interference did we deem the charge fully proven. Now, with all deference, I would venture to express my opinion, based on some experience, that although we must not neglect so timely a warning of probable rocks ahead, there is no specific evidence of present injury. During my residence at Rugby I was in medical charge of several preparatory schools where the educational standard was very high, and where the success was proportionate when the boys came to be drafted off into the big school. I may truly say that no case was brought under my notice during the space of three years which I could in any way trace to overwork. And this I attribute to the perfect manner in which the counterbalancing conditions of health were sustained, the good food, satisfactory hygienic conditions, ample time for recreation and active sports, and frequent holidays. Boys of that age do not fret or worry over their work — they throw it off in their intervals of repose, sleep well, eat well, play well, and so do not suffer. Depend upon it, it would be little to the credit of any proprietor of a private educational establishment were he to neglect the laws of health, and send his boys home enfeebled and worn out from too heavy mental strain.

As regards the larger public schools the same remarks apply, and I met with very few instances at Rugby of any bad consequences from overwork; and in the three or four well-marked cases which came under my care I was enabled to detect some other equally operative cause which predisposed to the seizure. Thus one lad, ambitious of distinction both at classics and football, had undergone violent physical exertion whilst exhausted by study, and the supply of nerve-force, not being available for this double strain, gave way, and a sharp feverish attack ushered in long-continued mental prostration. A second boy, who suffered from a precisely similar attack, had been sitting up late at night, and suffered some anxiety about a future prize; and a third lad, who completes the catalogue, had also consumed the midnight oil to an undue extent. But, as a general rule,

* Gazette Hebdomadaire, 1863.

† Gazette de Paris, 1863. Bitot and Netter are quoted second-hand, as I have been unable to refer to the originals.

‡ Treatise on Diseases of the Eye.

the typically healthy life and surroundings of our great public schools enable their inmates to withstand a much greater amount of work than lads brought up at home, who are often unduly spurred on, and who have not the healthful stimulus of enforced active exercise. Among this class I have seen a much greater proportionate extent of temporary break-down from the effects of mental exertion too long sustained and too little relieved.

Although the standard of the School Board is not very high, we may foresee a possible source of danger in forcing the minds of wretchedly feeble, ill-fed, and ill-housed children suddenly into educational grooves. I think I have seen an increase of headaches and nervous complaints among the children of the poor since compulsory attendance has been enforced, and would only wish to record the warning against attempts to make bricks too rapidly out of the straw which has fallen into our hands to mould for good or evil.

Coming to the universities, cases of overwork are, I imagine, more common there, for not only are the young men at a more sensitive period of life, but they naturally feel that to many of them this is their great opportunity—the great crisis of their existence, and that their success or failure will now effectually make or mar their career. Here the element of anxiety comes into play, sleep is disturbed, exercise neglected, digestion suffers, and the inevitable result follows of total collapse, from which recovery is slow, and perhaps never complete. Others, again, endeavour in their last year to make up for the frivolities of the first two, but when Dr. Morgan takes up for us the history of the intellectual life of the universities in the same exhaustive way in which he has traced the statistics of their leading oars, I doubt not that we shall find that the indictment of overwork brought against them has also been much exaggerated.

But, although less common than is generally supposed, instances of this class of breakdown do occur from time to time, and I should like to ask those who have devoted special attention to nervous diseases what is their view of the pathology of such cases as the following.

A student, or an artist, or the master of a public school, after a very heavy mental strain, suddenly gives way, and is seized with sharp illness, comparable in some degree to the old-fashioned brain fever. On his recovery he takes a prolonged rest, and his general health is perfectly restored; he looks strong and hearty, and has even gained flesh, and so at last he thinks himself well enough to resume his duties. But it is found that although he can do a little, anything like his old power of concentrated attention and steady application is gone, and if he tries to do a full day's work, he breaks down again in minor degree, and at last is obliged to content himself with taking only a very slight share in those occupations in which he used specially to excel, and in many cases his powers are never fully regained. With all the outward appearances of health, he well knows the very narrow limits within which he is now compelled to restrict his intellectual exercise. What, then, is the precise pathological condition here? Various diseases are also known to weaken the mental powers for long periods after convalescence is established, and of these scarlet and enteric fevers rank among the principal.

Brook-street, W.

## PROGRESSIVE MUSCULAR ATROPHY.

BY WILLIAM ALEXANDER, M.D.,
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THE following cases of progressive muscular atrophy were under observation for a considerable time. In one case death occurred, and was followed by an exhaustive microscopic examination of the cord, &c. The last case simulated this disease for some time, and, we think, may throw some light on its pathology.

We publish these cases the more confidently as Dr. Lockhart Clarke kindly examined specimens of the cord submitted to him, and he agrees with our description of the lesions that have taken place.

CASE 1.—E. N——, aged forty-eight, single, a servant, who has generally been employed washing floors, was admitted into the Liverpool Workhouse Hospital on March 13th, 1873.

*Family and previous history.*—None of her relatives suffered from any form of paralysis. She cannot attribute the disease to any special cause. She does not remember to have ever received any injury, nor at any time to have been exposed to severe cold. In 1872 she first felt a sensation as of "pins and needles" in the ends of the fingers of the left hand. This was followed by weakness of the thumb and afterwards of the fingers. Subsequently the right hand became similarly affected.

*State on admission.*—The left thenar and hypothenar eminences have completely disappeared. There are well-marked depressions corresponding to the interosseous spaces between the metacarpal bones. The first and second phalanges are flexed; the proximal phalanges extended, or, in other words, there is partial *main-en-griffe*. There is wasting of the muscles of the forearms, especially on the flexor aspect. The movement of the parts involved are diminished in proportion to the wasting. She cannot move either the fingers or the thumb, but she can to some extent move the wrist. Sensation in the affected parts is normal. She suffers from neuralgia in the left shoulder. There is no fibrillary tremor. General health good.

*Treatment.*—Easton's syrup, shampooing, and the constant current.

During the next six months she improved steadily: she became stouter, the atrophied muscles of the thumb and little finger increased in bulk, she could move the fingers slightly, and she had lost the desponding look that was noticed on admission. Next winter her general health continued in much the same state. Her hands became very susceptible to cold, which was remedied by wrapping them up in cotton-wool. The disease seemed to be at a stand-still. In the spring of 1874 she had an attack of bronchitis, during and after which attack the disease recommenced, and soon reduced the general and local symptoms to the state described on her admission. Her speech became affected, as shown by a peculiar hesitancy or difficulty, as if the muscles of the jaws were stiff and would not readily obey the commands of the will. She now complained of a weakness in the muscles of the back and legs, and an inability to stand or walk more than a few minutes at the time. Towards the end of the summer of 1874 she had some difficulty in swallowing, and on one occasion she was nearly choked whilst eating her dinner. In the ensuing autumn another attack of bronchitis came on, to which she succumbed in a few days. For a short time before her death her respiration was almost diaphragmatic, the external inspiratory muscles being very feeble. This was seen by the abortive and painful attempts she made during her last illness to get up the sputa that were suffocating her.

*Post-mortem examination.*—The legs did not show any wasting of special muscles. They were wasted generally in the same way as after phthisis or any other wasting disease. Unfortunately her urine was not examined during life, as there were no symptoms pointing to disease of the kidney; a specimen obtained after death contained hyaline casts and albumen. The cerebro-spinal axis did not present any evidence of disease. The spinal nerves at their exit from the cord showed no sensible diminution. The muscular tissue of the left thenar eminence had apparently disappeared, a small quantity of areolar tissue occupying its place. The muscles of the left forearm were pale, the deltoid very pale and atrophied. The right thenar eminence showed some muscular fibres. Diaphragm seemed healthy. Kidney a little reduced in size; capsule adherent in some places; the surface of the organ presenting elevations and depressions similar to but smaller than those seen on the rind of an orange. Muscular tissue of œsophagus very pale and easily broken up. Heart normal in size and appearance. Liver slightly fatty.

*Microscopic examination of cord and muscles.*—In the cord the following lesions were observed:—1. Atrophy of the cells, both of the anterior roots and of the postero-lateral columns in the cervical region. 2. Atrophy of the cells in the anterior cornua in the dorsal region, and granular degeneration of the cells of the postero-lateral columns of the same region; the degeneration of the postero-lateral columns not being so far advanced as in the cervical region.

3. Atrophy of the majority of the cells of the anterior cornua in the lumbar region, although we have found cells much more perfect than in any of the other regions. Here the cells of the postero-lateral columns are the most perfect in the cord, the degeneration being confined to the nerve-processes. 4. A dilated state of the bloodvessels, with hypertrophy of their coats throughout the cord. Around some of them was a granular semi-translucent material; around others a clear space from which this material may have fallen out. A large dilated bloodvessel on each side of the central canal could be seen throughout nearly all the extent of the cord. 5. The central canal was dilated at parts, and was everywhere filled by irregularly square-shaped cells, filled with granules, in most of which a nucleus could be observed. Here and there a small vessel could be seen amongst the cells. 6. That there seems to be more atrophy of the commencing anterior roots in the dorsal region than in the cervical region. In the affected muscles we found various stages of granular degeneration. In those least affected the striations were perfect, and a few scattered granules was the only change visible. The next stage seemed to be a confusion and obliteration of the striations, and a gradual increase of the granular material. The next change consisted in the fibres becoming varicose; the varicosities in a further stage had ruptured, whilst the sarcolemma remained as thin fibrous cords in the midst of the granules.

CASE 2.—J. M——, aged thirty-six, a shoemaker, single, was admitted into the Liverpool Workhouse Hospital in August, 1873.

*Family and previous history.*—Father and mother died of old age; one brother died of phthisis and another of some other disease the nature of which he does not know; two sisters still alive; no history of paralysis in the family. In his earlier years he enlisted as a soldier, was sent to India, where for seven years he drank heavily, chiefly ale and rum. During that time he suffered from ague and Asiatic cholera. Since the attack of cholera he thinks his muscular development has not been so great as before, but he did not at that time observe any loss of power. Had gonorrhœa twenty years ago; never had syphilis. In 1866, when stationed at Dover, he had a fall of sixteen feet from a scaling-ladder, his back coming into contact with the ground. He was not hurt, and he has thought no more about it since. In the beginning of 1871, when intoxicated, he slept a night in an open boat. A few days after he felt the thumb of the right hand cold and numb; this was followed shortly after by some loss of power, so that he was obliged, in cutting leather, to cut *from* instead of *towards* himself, and thus use his wrist in place of his thumb. The sense of chilliness and of loss of power extended up the fore-arm, so much so that he was obliged at intervals to give up work in order to warm his hands at the fire, after which he could work better. The ball of the thumb then began to waste; the chilliness and loss of power extended further up the forearm, compelling him to assist the right arm with the left in dressing himself. At the end of nine months the disease had reached the shoulder. He is very clear and decided in his statement that the feeling of chilliness always invaded a new region before the loss of power. On account of the warmth he was accustomed to walk with his right hand in his pocket, having to put it in or take it out by means of the other hand. From the shoulder the disease invaded the neck. He soon became unable to keep his head erect without artificial aid. This he generally accomplished by resting his head against the wall. From the shoulder the disease went *down* the left arm, invading first the shoulder, then the arm, forearm, and hand in succession. He is certain of this, as he remembers at one part of its course when, after propping the forearm on the table, he could button his vest with ease, his fingers retaining full power, and at a time when he could not flex his elbow nor raise his arm. It took the disease four months to go down the arm. About the beginning of 1873 he observed that he had lost control of the right foot; he could not put the heel to the ground, and he missed the elastic "spring" that he formerly had in walking. In a few weeks the left leg and foot became affected similarly to the right, the patient being obliged to walk on his toes, as he says, to prevent his falling backwards. His sight has always been good. Has had a pain in his back for the last four months, and for the same period has been troubled with headaches.

*State on admission.*—The patient has a very peculiar appearance; his face is shrunken and emaciated, except where the masseters, which do not seem to be affected, stand out in relief; his head is thrown back; his arms hang helplessly by his side. To describe his appearance more particularly, the thenar and hypothenar eminences in each hand are completely wasted, the fingers flexed, the interosseous spaces hollowed out from loss of the muscles, and the arms wasted, and only retaining the shape given to them by the bones. Both pectorals are wasted, but especially the part that takes origin from the clavicle. The supra- and infra-spinatus are also affected. On turning the patient round, the trapezius is seen to be considerably atrophied. The legs are not nearly so much affected, and the thighs not at all. When the arm is raised at right angles to the shoulder, he can draw it backwards and forwards by the latissimus and pectoralis major muscles respectively. In walking he inverts the foot, depresses the toes, at the same time swinging the leg forward by means of the muscles of the pelvis and thigh, thus bringing his toes first into contact with the ground. He is unable to sit for more than half an hour in the erect position. Sensation, although defective, is nowhere entirely lost. The patient, in regard to it, states that when first attacked he could feel the awl with his fingers much better than he could with his thumb. He often saw a "flickering" in his muscles as if "something was moving under the skin," but no fibrillary tremor was observed whilst he was under observation. His appetite is fair, bowels regular, and his intellect quite clear. His powers of observation are remarkably good, as shown by the intelligent account he gave of his disease, and of the onset of the various symptoms. No albumen in urine.

Easton's syrup in drachm doses three times a day, with the application of the continuous current, were prescribed.

Patient remained in hospital for several months. He went to Ireland and has not been since heard of.

*State at time of discharge.*—The nutrition of the muscles of the neck and head is considerably improved. He can hold his head erect for some time without fatigue, and he is able to throw his arms about in a much more vigorous manner. The movements of the muscles of the forearm are almost in the same state as they were on admission.

The interrupted current was used for some time, but it did not seem to have the same beneficial effect as the continuous one.

*(To be concluded.)*

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CASE OF

# COMPOUND COMMINUTED FRACTURE OF SKULL; LACERATION AND ESCAPE OF BRAIN-MATTER; PARTIAL PARALYSIS OF RIGHT ARM; REMOVAL OF THIRTEEN FRAGMENTS OF BONE; RECOVERY.

BY ALFRED KEBBELL, M.R.C.S. ENG.,
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ON October 1st, A. K——, aged nineteen, farm-labourer, was struck on the left side of the head with a rake during an altercation with a fellow servant. I was sent for almost immediately, and on my arrival I found the patient, a healthy-looking young fellow, seated on a chair in the kitchen. The surface was cold, but the patient was quite sensible. On the left side of the head, and about two inches above the ear, and rather to the front, was seen a ragged-looking wound of about one inch and a half in length; the direction of the wound was from before backwards. Blood of a dark colour was oozing, which received a pulsatory movement.

On introducing the finger a circular and depressed fracture of about the size of a two-shilling-piece could be felt; the centre of the depression was deeply down. The patient was placed in bed, and by this time was rather drowsy. Pupils equally dilated; right arm and leg weak; could hardly grasp with the right arm. The wound was enlarged about half an inch at either end. There was free hæmorrhage from a large vessel in the scalp, which was ligatured. By the aid of the handle of a pair of dissecting forceps, used as an elevator, the edges of the fracture were raised,

and thirteen pieces of bone, varying from the size of a threepenny-piece to sixpence, were removed. The membranes were torn, and one piece of bone, of the size of sixpence, and composed of both plates of the skull, was felt to be almost buried in brain-matter. The point of this was seized by the dissecting forceps and removed. Several pieces of the inner table were removed. Small portions of brain-matter escaped.

The wound was left open and covered with wet lint.

The patient expressed himself as feeling easier immediately after the operation. The surface was cold; pupils equal, but not answering readily to light. Hot bottles were ordered to the feet, the patient to be kept perfectly quiet, and the room darkened. Diet to consist of milk and beef-tea. A large saline purgative was given, and five grains of mercury with chalk ordered to be taken every six hours. Pulse 80.

About two hours after the operation the patient said he felt easy and was inclined to sleep; the surface was warmer, but the pulse was not much quickened, being 90.

Oct. 2nd.—Pulse 94; respiration 26; temperature 99°. Slept well during the night. Free from pain. Skin warm; pupils equally dilated; bowels not open. Ordered to take five grains of mercury pill immediately, to be repeated if necessary. Passed urine. Tongue furred. Evening temperature 99°.

3rd.—Pulse 78; respiration 20; temperature 99·2°. Passed a good night, only waking to take his powder; was dreaming a little. No pain whatever in the head. Bowels opened this morning. Passed urine freely. Pupils dilated, both answering to light. Slight facial paralysis. Speech altered, but not indistinct. Loss of power in right hand rather less. Last evening, after seeing a policeman and two or three strangers, against orders, he did not feel so well, and his speech became more affected. Wound dressed; looking well. Evening temperature 98·4°.

4th.—Pulse 74; respiration 20; temperature 98·4°. Did not sleep quite so well as on the previous night, being kept awake by pain over the left side of the head. The pain lasted about an hour, then went. Quite free from pain now. Bowels open once. Speech rather more indistinct. No sickness. Mouth slightly sore from the mercury. Powder to be taken twice a day. Evening temperature 98·4°.

5th.—Pulse 64; respiration 20; temperature 98·4°. Going on well. Wound looking healthy.

From this date the patient never had a bad symptom, and the temperature was never above normal. On Oct. 20th the wound was just healed, and all the symptoms of paralysis were gone. On Nov. 8th he was at work again. On Dec. 10th he called to see me, and he continued quite well.

Flaxton, York.

# A Mirror
## OF
# HOSPITAL PRACTICE,
## BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

## KING'S COLLEGE HOSPITAL.

### A CASE OF INTUSSUSCEPTION OF THE LARGE INTESTINE; ABDOMINAL SECTION; DEATH.

(Under the care of Mr. ROYES BELL.)

THE following case is important as illustrating the difficulty that may attend the reduction of an intussusception, even when there are no adhesions.

The patient was originally under the care of Dr. J. Henry Philpot, physician to the St. Pancras and Northern Dispensary, to whom we are indebted for the subjoined notes.

A male child, sixteen months old, was taken by his grandmother to the dispensary on October 21st. The grandmother stated that the child had been delicate from birth, and had been brought up by hand; and that he had been troubled for a long time with diarrhœa. On Oct. 17th the diarrhœa suddenly ceased, but as the child seemed as well as usual, except that he showed less desire for food, no attention was paid to it. When in bed with him on the night of the 18th she was disturbed by his suddenly crying out with pain, and noticed that he had wetted his night-dress. By the morning light she found his night-dress stained with blood, and there was also a clot of dark blood on it of the size of a half-crown. From that time the child became manifestly worse: he was dull and sleepy; refused nearly all food, and mostly brought up the little that he had been coaxed to take. At the same time there was great thirst. The child showed signs of suffering from pain, and his belly swelled. Every now and then he appeared to strain, but the only result was a small quantity of slime and blood.

When first seen (October 21st) the child looked pale and anxious; his limbs were thin and flabby, but the abdomen was swollen and tympanitic. On deep pressure in the left iliac region, a distinct tumour could be felt extending up into the left lumbar region. Its limits could be clearly mapped out by percussion, and it was found to be about three inches in length, and one inch in breadth. About the anus some blood-stained viscid mucus was found clinging. On digital examination per rectum, no obstruction could be detected, but on gently passing a soft bougie, some resistance was met with about five inches above the anus. The child bore all these manipulations without complaint. Intussusception of the larger bowel was diagnosed. On the following day the child was seen by Mr. Cross, the resident surgeon, who stated that, on rectal examination by the finger, the anus was found to be very lax and the rectum roomy; about three inches from the anus, the finger met with an obstruction, which was evidently an intussuscepted portion of the bowel, which was felt projecting into the rectum in the form of a soft, rounded tumour, resembling the os uteri in the pregnant state. The finger could not only be passed round the descended gut, between it and the rectum, but was also easily admitted into the orifice of the former. On withdrawing the finger, it was found smeared with blood and mucus, showing that the intussuscepted mass bled easily. On examination with the rectal speculum, the invaginated portion presented an ash-grey colour. The resisting tumour was still to be felt in the left iliac fossa, and its boundaries could be distinguished on percussion as before. Copious injections of warm soap-and-water were made by Mr. Cross, but without the desired effect of restoring the intussuscepted bowel.

As it was impossible to proceed to more radical treatment at the grandmother's house, the child was admitted into King's College Hospital, under the care of Mr. Royes Bell, who is also surgeon to the dispensary.

On Saturday, the 23rd, six days after the cessation of the diarrhœa, the symptoms were in all essential points unchanged, except that the child was more apathetic, the abdomen was more swollen and tympanitic, and there was still less appetite. Vomiting continued, but was by no means frequent or distressing, and the ejecta were inoffensive. It was determined on consultation first to inject air per rectum, and in the event of that expedient proving unsuccessful, to proceed at once to perform abdominal section. A few whiffs of chloroform were given, and a tube was passed up to the orifice of the intussuscepted portion, gentle attempts being made to return the bowel by this means. These attempts were, however, unsuccessful, as was also the injection of air into the lower bowel and into the orifice of the prolapsed bowel.

Abdominal section was then performed. An incision through the skin was made down the median line of the abdomen, commencing one inch above the umbilicus, and extending nearly to the symphysis pubis, and the layers of abdominal wall were divided upon a director. The peritoneum was carefully opened, and the intestines were seen to be much distended with gas, and pink and injected on their surface. It was impossible to prevent some portion of the small intestines from escaping from the wound, but they were immediately covered by a cloth wrung out in warm water. The intussuscepted bowel was readily found, occupying the left iliac and lumbar regions. It was from three to four inches in length, about one inch in diameter, and sausage-shaped, solid to the touch, and dark purple in colour, with distended vessels ramifying upon its surface. It was evident that a portion of the descending colon had become intussuscepted in the sigmoid flexure. Attempts were made to reduce it, but though as much traction was

made as could be safely ventured upon, it could not be moved. Mr. Bell therefore proceeded to pass threads through the portion of bowel immediately above the intussusception, and then opened it. A quantity of grey fæcal fluid and some gas escaped from the opening, and the former was received upon sponges, none of it being allowed to come into contact with the peritoneum. The escaped bowels were then returned with some difficulty, and the opening in the abdominal wall was closed, the artificial opening in the bowel being sutured to the upper part of the external wound. The child seemed to bear the operation well, but his strength gradually failed, and he died about seven hours after it.

On examination of the body forty hours after death, the thoracic viscera were found quite normal. In the abdominal cavity the intestines were glued together by recently formed lymph. The intussuscepted portion was discovered occupying the left region of the abdomen. A part of the transverse colon, the splenic flexure, and part of the descending colon were intussuscepted by the rest of the descending colon and the sigmoid flexure, whose serous coat was ruptured in several places. It was found impossible to reduce the invaginated bowel by using ordinary force. On opening up the sigmoid flexure the intussuscepted portion was seen to be twisted in a somewhat spiral manner. On cutting through the second layer of sigmoid flexure no lymph was found between the serous surfaces, except at the extreme lowest portion of the bend. The portion of bowel projecting into the rectum was found deeply congested and moderately hard. The orifice in its centre was elongated, owing to the traction of the mesentery in that portion of the lip of the orifice corresponding to its attachment. A large-sized catheter could be passed right through the intussuscepted portion into the normal intestine above it. The stomach and the rest of the intestines were moderately distended with gas; the other abdominal organs were perfectly natural.

It may be remarked, that from the first there could be no doubt about the diagnosis, but, in any case, the prognosis was almost hopeless, especially after the failure of the milder methods of treatment. It was one of those cases in which Mr. Hutchinson recommends early resort to the operation of abdominal section; but though, as proved at the post-mortem, the adjacent serous coverings of the bowels were not bound together by lymph to any great extent, it was found impossible to reduce the intussusception by traction, either in the operating theatre or in the dead-house. The history of the case—intussusception following on constant diarrhœa—points to another risk attending the latter condition in young children, and provides an additional argument in favour of arresting it as soon as possible.

## NORTH-EASTERN HOSPITAL FOR CHILDREN.

### PROBABLE REDUCTION OF INTUSSUSCEPTION BY COPIOUS INJECTION WITH THE BODY INVERTED.

(Under the care of Mr. WARREN TAY.)

IN the following cases the value of copious injections, while the pelvis was raised, was well exemplified.

An infant, aged seven months, came under care Sept. 26th, 1874. On the previous morning it was taken ill suddenly, began to strain to pass a motion, seemed in pain, and passed only blood and slime, and was sick. Mr. Butlin and Dr. Dixon, of Victoria-park, saw the child, and suspected that intussusception had occurred. Air was injected with a pair of bellows, but no relief followed. When seen, about thirty hours after the commencement of the symptoms, the child was straining constantly, as if about to pass a motion, and seemed in pain. A finger passed up the rectum encountered some obstruction high up, which felt as if it might be the lower end of an intussusception, but it was so high up that this could not positively be stated to be the case. When withdrawn, the finger was covered with blood and slime. No definite tumour could be felt on the left side through the abdominal wall.

A quantity of lukewarm water was injected into the rectum while the child was held up by the feet. As large a quantity as possible was injected. The child seemed relieved immediately the fluid was allowed to run out, and on examination by the rectum no sensation was communicated to the finger similar to that felt before the injection. When seen the next day, the child seemed quite lively and well, and had remained so when heard of some time later.

Straining, accompanied by the passage of blood and slime by the rectum, and the presence of blood and slime in the rectum, detected on examination, are so fairly characteristic of the occurrence of intussusception in children, that the diagnosis in this case admits of little doubt. It is confirmed by the probable presence of a bulging within the rectum, and by the great and immediate relief which followed the treatment adopted. It is probably not very material whether air or water be injected, but it is very important to have the patient held up by the heels. Mr. Hutchinson has repeatedly insisted on this. An American physician (Dr. Battey) has lately stated that fluid can be made to gravitate *slowly* through the ileo-cæcal valve, along the whole tract of the small intestine, through the stomach, and even out of the mouth. However this may be, there can be no doubt that in certain cases of obstruction of the bowels the injection of copious enemata during or followed by inversion of the body, and, if necessary, whilst the patient is under the influence of chloroform, is succeeded by complete relief, even where the symptoms are very acute. A case of this sort came under Mr. Tay's care at the London Hospital in 1872. It is sometimes difficult to ascertain *when the injection has been carried far enough* in cases of intussusception. A child aged fifteen months was taken to the North-Eastern Hospital on June 30th, 1870, suffering from an intussusception of twelve hours' duration. It could be felt just within the anus. The child was sick, had passed blood and mucus, and seemed in great pain. The invagination could not be replaced with the finger, but when warm water was freely injected, the tumour which had been felt slipped out of reach, and great relief was apparently afforded the child. It was considered that the intussusception had been reduced. The child, however, continued to pass only bloody slime, and when seen the following day some tumour could be detected as high up as the finger would reach. A copious injection was again thrown up, while chloroform was given, and the child was inverted, but no change was produced in the symptoms. The child lived for six days altogether, and at the post-mortem an exceedingly short invagination of the transverse into the descending colon was found. There were no traces of peritonitis, and the invagination was easily reducible. Probably more perseverance *at first*, after the injection had seemed successful, would have completed the release of the bowel. This case showed the fallacy of being deterred from operative procedures on the supposition that peritonitis must necessarily have set in and that the parts were glued together.

## ST. BARTHOLOMEW'S HOSPITAL.

### A VERY UNUSUAL CONGENITAL DEFORMITY.

(Under the care of Mr. THOMAS SMITH.)

ALICE T——, aged five months, was admitted into Lucas ward Sept. 20th, 1875. The patient was a healthy, well-nourished child. She has a well-formed mouth in the usual situation. On the left side, below the angle of the mouth,

was a second orifice, surrounded by mucous membrane and a sphincter muscle. Its position and size were as represented in the accompanying woodcut. There was a small

cutaneous bridge which separated the mucous edge of the lips from that of the abnormal opening. When the features were at rest this supernumerary orifice was closed; when the child screamed it opened widely, and gave exit to an abundant flow of saliva. The aperture led into a cavity between the cheek and mucous membrane of the mouth. The cavity itself had no communication with the mouth, and was situated mostly towards the left side of the opening, and beneath the cheek. There was a small ranula beneath the tongue, and on the outer surface of the jaw, beneath the abnormal pouch, there was a stunted bony prominence.

Sept. 25th.—Mr. Smith pared away all the mucous membrane from the edge of the abnormal opening, and removed a large portion of the mucous membrane between the cavity of the mouth and the pouch beneath the cheek. The wound was closed with fine silver wire sutures and horsehair, the whole being covered with collodion.

A week later the stitches were removed, and the wound was found to be soundly healed.

## MOORFIELDS OPHTHALMIC HOSPITAL.

### OPHTHALMIC CASES.

(Under the care of Mr. HUTCHINSON.)

*Saemisch's Operation for Hypopyon Ulcer.*—Several cases have lately come under notice in which Saemisch's proposal of cutting across the centre of the cornea in cases of serpiginous ulcer with hypopyon has been carried out, and in most the success has been exceedingly good; in some, however, the treatment has proved troublesome, and it has been necessary to keep the wound open by the repeated use of the spatula for long periods. Before the publication of Saemisch's paper, Mr. Hutchinson was, he stated, in the habit of doing an iridectomy downwards, and he was by no means sure that he did not still prefer that method. The two plans had the same object in view—to diminish the tension on the inflamed cornea, and at the same time to evacuate the hypopyon. In many cases after an iridectomy the patient's pain is at once and permanently relieved; the hypopyon never re-forms, and the ulcer steadily heals afterwards. As there is generally a central opacity resulting from the ulcer, the iridectomy method of treatment has the additional advantage of securing beforehand an artificial pupil. Mr. Hutchinson referred to Mr. Teale's able report on Saemisch's operation in a recent number of the Ophthalmic Reports, and quoted Mr. Teale's eulogy to the effect that it was a proposal second only in practical value to Graefe's operation for glaucoma. He was almost prepared to endorse this estimate if it were allowed to include iridectomy also. He wished, however, to insist strongly that neither of the two rival operations ought to be resorted to until after an efficient trial of the hot-fomentation plan. In a large majority of cases, corneal ulcers with hypopyon, if seen in an early stage, will do perfectly well if the patient be put to bed and the eye fomented constantly with a hot belladonna solution; but it must be almost literally constant, and as hot as the patient can possibly bear it. Anything short of this in these dangerous cases is usually only waste of time.

*Treatment of Onyx with Hypopyon.*—Onyx with hypopyon is a much less common condition than the serpiginous ulcer. By chance two interesting examples of it are at present attending. In each the onyx was central, and in neither at the time the treatment was begun was there any ulceration of the surface. In each of them the treatment ultimately adopted was an incision through the centre of the onyx into the anterior chamber. In the first the hypopyon repeatedly relapsed, and the onyx re-formed as soon as the edges of the corneal incision adhered. It was necessary to use the spatula every morning for nearly three weeks. A fairly satisfactory cure was at length obtained. The second case is still under treatment. Mr. Hutchinson stated, in respect to these cases, that they were the only ones in which he had employed the incision for onyx, and that in neither of them had the result been so definitely good as to tempt him in the future to forego a patient trial of the fomentation plan before resorting to operation.

*Retinitis Hæmorrhagica as a consequence of Gout.*—An interesting case in confirmation of the opinion that retinal hæmorrhages are particularly prone to occur in the subjects of gout came under notice the other day. The patient, an elderly man, came on account of cataract in one eye, but, in taking his history, it was discovered that he had suffered severely from gout. Ophthalmoscopic examination of the non-cataractous eye, which he considered to be quite sound, revealed the presence of two flame-shaped patches of extravasated blood near to a large retinal vein and artery. Mr. Hutchinson remarked that he had long held that the cases of typical retinitis hæmorrhagica occurred almost solely in the subjects of gout. This case was not one which could be definitely placed in that category, since the hæmorrhages were not numerous, and there was little or no evidence of inflammation of the retina. Still, however, their presence was of interest in reference to the opinion that there was a special tendency to retinal hæmorrhage in gouty patients.

# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON.

THE ordinary meeting of this Society was held on the 21st ult., Mr. G. Pollock, President, in the chair. Many interesting specimens were shown, including one of hæmorrhagic periostitis, by Mr. T. Smith; one of epithelioma of lung and toe, secondary to similar disease in the tongue, by Mr. Godlee, whose explanation as to the genesis of the thoracic growth by the inhalation of some of the morbid products after the operation for removal of the tongue was certainly ingenious, and almost the only one that could be offered. The opportunity for discussion thus afforded was not embraced by the members.

During the evening Dr. Pitman was elected a member of the Society.

Mr. THOMAS SMITH showed a specimen of Hæmorrhagic Periostitis, remarking that he had neither seen nor read of a similar case. The patient was a girl, aged one year and eleven months. She had been suckled up to three months of age, and beyond a slight attack of diarrhœa had no noteworthy illness. There was not the least evidence of syphilitic taint; and there was but slight rickety enlargement of the ends of the ribs. The child could stand and walk alone. Eleven months before admission there were swelling and tenderness of both lower limbs, commencing in the feet. This disappeared until two months before admission, when the feet again began to swell. When admitted the child lay on its back with legs stretched out and motionless. The whole of each lower limb was swollen. The hip- and knee- joints were unaffected. The temperature ranged between 99 degrees and 101·5 degrees, and death took place suddenly six days after admission. On examination the following lesions were found, symmetrical as to the two sides. Complete separation of the epiphyses of the femur, and a large amount of recent blood-clot between the periosteum and the shaft, which was smooth and white. The structures in the hip- and knee-joints were healthy. There was some extravasation into the muscles of the thigh. In the leg, besides some effusion into the muscles, there was similar detachment of the periosteum and separation of epiphyses from the tibia and fibula, with a large amount of extravasated blood around the denuded shafts. The upper limbs were not examined; crepitation could be easily felt at the shoulders, but not at the elbows. No visceral disease beyond an embolic infarct in the lower lobe of left lung.—In reply to Mr. Wagstaffe, Mr. T. SMITH said that there was no history pointing to the existence of a hæmorrhagic diathesis in the family. He had excluded syphilis, rickets, purpura, &c., as causal conditions, and thought the hæmorrhage arose from the diseased and in-

flamed periosteum. The separation of the epiphyses was too complete to be merely mechanical.—Dr. GOODHART referred to a somewhat analogous case which he had seen a few years ago. The patient, a young boy, was admitted with considerable swelling of the left calf; only blood flowed after free incisions, and the limb was eventually amputated. In this case there was a large collection of blood beneath the periosteum, which was detached from the tibia, and extravasated into the muscles. There was no separation of the epiphyses.—The PRESIDENT agreed with Mr. Smith that the hæmorrhage was due to periostitis, there being a tendency to hæmorrhage in the patient. He cited a case of general venous hæmorrhage into an abscess about the hip in a boy who had before been the subject of disease in the opposite hip.—Mr. MAUNDER had seen two cases in which, on cutting down on supposed periosteal abscess, blood only escaped.

Dr. GOWERS showed a specimen of Fatty Tumour of the Spinal Cord, obtained from a man who had died of emphysema, and who was also the subject of locomotor ataxy. The tumour, which measured about half an inch in every direction, embraced in a concentric manner one-half of the conus medullaris of the spinal cord. Some of the nerves of the cauda equina were embedded in the fibrous wall of the growth, which was itself yellowish and soft. Histologically, the tumour was found to be composed mainly of fat-cells, with a slight amount of nuclear and fibrillar tissue between the cells. In one part were a certain number of transversely striated muscular fibres in the midst of loose fibrous tissue. Dr. Gowers remarked that this was the only instance of fatty tumour of the spinal cord which he had been enabled to find. There were about six examples of similar growth connected with the encephalic dura mater, pia mater, or the choroid plexus. The existence of striated muscle in morbid growths was known to occur. He did not think there was, in the present case, any relation between the tumour and the sclerosis of the posterior columns, which was well-marked; for the growth was not in direct relation with that part of the cord, but with the lateral region. Nor is it the tendency of fatty tumours to cause degenerative changes in organs. Nor was it likely that the growth could have resulted from the fatty products of degeneration of the columns. The association of the two lesions was then merely accidental.

Mr. C. HEATH exhibited a patient from whom he had removed an Epithelioma of the Chin. The man was fifty-five years of age, and had an epithelioma of the lip excised by Mr. Heath four years ago. Recurrence took place on the chin in November, 1874. One year later the tumour measured 6 in. by 5½ in., and extended 2½ in. to the right and 3½ in. to the left of the middle line; below, it reached to the hyoid bone. Mr. Heath removed the mass by dissecting up a flap of skin, and sawing off the chin. The large surface granulated rapidly, and as yet there is no indication of recurrence. In the operation the cavity of the mouth was not opened.—Mr. Heath also showed again the patient from whom he had removed an Epithelioma of the Tongue and Lower Jaw, which he related at a previous meeting. (See THE LANCET of Nov. 6th.)

Mr. LENNOX BROWNE exhibited a patient with Enlargement of the Thyroid, who presented curious disturbances attributable to disorder of the sympathetic. The patient was a female, much emaciated, in whom there was enlargement of the right lobe of the thyroid, not greater than a hen's egg, which encroached on the trachea. She suffered from dyspnœal attacks, which he attributed to interference with the action of the muscular fibres of the air-tube. There was unilateral sweating of the face and neck, the right side being dry; contraction of the right pupil; anæmia of both optic discs, but no alteration of vision; slight ptosis of right eyelid. The temperature in the left axilla was about one degree higher than that in the right, which was normal. The sphygmograph showed increase of tension in the right radial pulse as compared with the left. The patient dwelt in Luton—a goitrous district,—and had suffered from this enlargement for fifteen years. She had spasmodic attacks of dyspnœa.

Mr. GODLEE showed a specimen of Epithelioma recurrent in the chest and toe after the successful removal of an epithelioma of the tongue, and without glandular affection in the neck. The primary growth was removed by Mr. Erichsen in [illegible]r, 1873, from a man fifty-six years of age, then strong and healthy, by means of the galvanic écraseur and the scissors, but at the end of the operation very extensive hæmorrhage occurred from the ranine artery necessitating laryngotomy to prevent total asphyxia. This was specially drawn attention to as probably exercising an important influence on the sequel. He made a rapid recovery, and continued quite well for six months, when some indefinite symptoms appeared, but no return of the disease in the tongue or neck showed itself. Fourteen months after his discharge he noticed a small tumour on the middle toe of his right foot, originating as a strawberry mark in the skin; this grew rapidly, and in four months' time reached the size of a small hen's egg. Six weeks after this was noticed bronchitis set in, followed by the rapid onset of extreme cachexia. On readmission to the hospital, besides the tumour in the toe, there was a large mass projecting from the front of the right chest, and a gland in the right groin. Both the tumour in the chest and that on the toe expanded synchronously with the heart's beat. The patient rapidly sank, and died exhausted. Post mortem a large mass was found in the right lung forming part of the tumour, which projected externally, and another large mass occupied the anterior and posterior mediastina, separated, however, from the former by a considerable thickness of compressed lung, indicating that the mass in the chest was not a direct continuation of that in the mediastina. There were two or three small nodules in the other lung, and a large number in the thickened and completely adherent pericardium. Mr. Godlee considered the interest of the case to hinge on the problem as to the method of infection, if such had been the case at all. If the tumour were epithelioma, the growth in the tongue must have been primary. Recurrence must have taken place either before or after the operation for its removal. To maintain the latter position implied belief in the constitutional tendency, not only to the development of cancer, but of the least malignant form—viz., epithelioma; and, to support the former, only two explanations seemed possible—first, that recurrence occurred without the involvement of the lymphatic glands next to the original tumour—a process which is opposed to the accepted doctrines as to the propagation of epithelioma; and, secondly, that pieces of the tumour were drawn into the lungs either at or before the operation. In support of this view, Mr. Godlee adduced the improbability of other explanations, and the excellent opportunity afforded by the accident which occurred during the operation. The reasons he suggested why such a recurrence does not occur more frequently were—first, the rarity of the accident during the removal of the tongue; secondly, the morsels separated from a tumour in the ordinary course of events have lost their vitality; thirdly, if living particles were separated, they would almost certainly pass into the œsophagus, instead of the trachea, and be there digested. The analogy of this mode of development is to be found in the dissemination of cancer of the peritoneum following rupture of a large mass into that cavity.

Mr. WALSHAM exhibited a specimen of Sarcoma of the Right Clavicle removed by Mr. Begbie, of Leicester, from a girl fourteen years of age. The tumour involved the outer three-fourths of the bone. It had grown rapidly. The whole clavicle, with some contiguous glands, was removed. The tumour was soft and friable, and sprang from the periosteum. Microscopically it exhibited the characters of a round-celled sarcoma. Mr. Walsham remarked upon the rarity of tumours of the clavicle. On the suggestion of the President, the specimen was referred to the Committee on Morbid Growths.

Dr. FRED. TAYLOR showed a specimen of Aneurism of the Aorta, which had ruptured into the œsophagus. It occurred in a man fifty-three years of age, who had suffered for five months from symptoms of constriction at chest and some dyspnœa. There was displacement of the heart's apex, and slight dulness over the apex of the left lung; no murmur. He died suddenly ten days after admission. Post mortem there was found a large aneurism of the aorta just beyond the left subclavian. The stomach was distended with blood, which also occurred in the intestines. The blood had found its way into the stomach chiefly by means of a channel communicating with the aneurism found between the layers of the transverse muscular fibres of the gullet.—In reply to Dr. CRISP, Dr. Taylor said there was no history of syphilis in the case.

Mr. ALBAN DORAN exhibited the Bones in a Case of Arrest of Development of both Forearms, taken from a female pauper fifty-four years of age. The humeri were of average size, but the ulna and radius were exceedingly small, the radii each measuring four inches and a half in length. The carpal end of each radius was enlarged, and the bones of the hand seemed normally developed. The bones had disintegrated much in the process of maceration. Mr. Doran excluded infantile paralysis and rickets, and thought it certainly a case of arrest of development.—In reply to Mr. WAGSTAFFE, Mr. Doran said that no evidence as to maternal impression could be obtained; and, in answer to the PRESIDENT, he stated that the movements of pronation, &c., were perfect.

Mr. SPENCER WATSON read a Report of the Sequel to Dr. Walker's Case of Recurrent Sarcoma of the Leg, which appeared in the 22nd and 24th vols. of the Transactions. In this case five successive operations were performed for the removal of the growth, which was a spindle-celled sarcoma; and on one occasion recurrence was retarded by ligature of the femoral artery. Recurrence finally took place in the femoral glands, and the patient died. The time during which the case was under treatment extended over three years and a half.

Dr. GOODHART exhibited a specimen, with drawings, of an Embolic Infarct in Heart Muscle. The patient was a girl eighteen years of age, with extensive disease of the mitral valve, causing constriction of the orifice. Besides emboli in other organs, a large extravasation of blood was found in the wall of the left ventricle. Careful search failed to find any plug in the vessels leading to the part, but this could not be taken as absolutely opposed to the view of its embolic origin. The clot was surrounded by a bright-yellow zone, as in emboli of other organs; and there was a large quantity of semi-fibrous material between the muscular fibres in the neighbourhood, as well as capillary ecchymosis. Dr. Goodhart thought the fibroid tissue between the muscular bundles represented the remnants of atrophied muscular fibres, secondary to the extravasation of blood. This rather bore out Dr. Fagge's statement as to the infrequency with which small-celled infiltration preceded the formation of fibroid tissue of the heart. He suggested also that a similar condition might account for some cases of sudden death during the process of washing out the pleural cavity; and he related a case of empyema, in which an attack of syncope during this operation occurred, ending later in death.—Dr. GOWERS asked if the age of the infarction could be ascertained.—Dr. GOODHART thought it must have been very recent, probably three or four days before death.—Mr. BUTLIN, referring to the supervention of syncope during the operation for empyema, mentioned that when he was registrar at the Hospital for Sick Children, the practice of administering anæsthetics in these cases was withheld, as apparently favouring such seizure.—Mr. HEATH inquired what was the nature of the fluid injected. He believed that carbolic acid injections were harmful. The large surface favourable for the absorption of fluid presented by the pleura must be borne in mind.—Mr. MORRIS referred to a case recently in the Middlesex Hospital, where death followed on the injection of iodine into the pleural cavity, the injection having been practised many times before.—Mr. DORAN mentioned a case of injection into the pleura of Condy's fluid, with almost fatal syncope. No anæsthetic was given, and on the next occasion chloroform was administered without ill effect.—Mr. GODLEE thought the nature of the fluid employed was unimportant; and he cited a case of empyema in which the pleural sac had been for a long time washed out daily with a weak solution of iodine, till on one occasion sudden death occurred.—Dr. DOUGLAS POWELL suggested that when the operation is frequently repeated its details may not always be studied; thus a larger quantity of fluid than usual might be injected. He mentioned a case similar to the others quoted, in which the fluid injected was a weak solution of carbolic acid. One day some of the fluid appeared to be retained, and the patient died suddenly during the operation.

Before the adjournment, the President announced that at the first meeting in February Mr. Jonathan Hutchinson would open a discussion on the Pathology of Syphilis. The points he intended to raise would be laid before the members at the next meeting.

## MEDICAL SOCIETY OF LONDON.

AT the meeting of the 13th ult., Dr. Routh, President, in the chair, Dr. LAWSON exhibited an instrument called a Hæmatimeter for conveniently measuring the number of red corpuscles in the blood. The apparatus is the invention of M. Hagem, and is manufactured by M. Nachet, of Paris. It consists of a microscope, the slide of which is prepared to contain liquid of barely the one-fifth of a millimetre in depth, and the eye-piece is provided with a micrometer, in which the one-fifth of a millimetre is squared and divided into 16 equal spaces. Pure blood is not used, as, if it were, the corpuscles would be far too numerous to count; therefore, by a specially measured instrument, two cubic millimetres of blood are taken, and immediately mixed with half a cubic centimetre of serum. A portion of this mixture is then placed upon the slide so as exactly to fill it; then, on looking closer through the microscope, the number of globules in the sixteen spaces can be counted. If this number be represented by $x$, $x \times 125 \times 251$ will give exactly the number of red globules present in a cubic millimetre of the blood under examination.—Dr. THEODORE WILLIAMS made a few remarks on the great uses to which the instrument might be put.

Mr. DAVY (one of the honorary secretaries) read for Mr. A. FREER, a report of the Post-mortem Appearances in a case of Vaginal Impalement, in which death had taken place four years and a half after the accident. The case had been brought before the Society in 1871, and was that of an Irishwoman who, in jumping off a corn-rick, alighted on the round thick end of a hay fork; this was immediately pulled out of her body some two feet, and she was brought home (a distance of three miles in an open carriage). When seen by Mr. Freer, two hours after the accident, she was suffering from extreme collapse, and crying out that the pike had hurt her heart. On examination per vaginam, bleeding was found to be going on from a rugged rent by the side of the uterus, through which two fingers could be passed into the peritoneal cavity; this was at once plugged with lint, and the bleeding ceased. An emphysematous crackling and swelling of the skin, together with the crepitus of a broken rib, were also present in the left side, where dreadful pain was complained of. The lint stripe were removed on the fifth day, and from this time rapid improvement took place. About a fortnight afterwards the patient declared herself quite well, with the exception of a little weakness. Sixteen months afterwards she was confined with a fine boy. About three years after, when again far advanced in pregnancy, she complained of pain in her side and dyspnœa, together with constipation and sometimes sickness. On March 2nd, 1875, Mr. Freer saw her with Mr. George Birt. They found labour had set in during the night, but that the woman was evidently dying. The labour-pains were then gone, though a fœtal head was ready to press on the perineum, notwithstanding which the friends would not allow forceps to be used; and she died in two hours. The post-mortem revealed a thin uterus (containing a large male child), a contracted state of the rectum and of the descending colon. A roundish hole was found through the muscular part of the left wing of the diaphragm just in front of the central tendon, through which the transverse portion of the colon, the greater part of the omentum, the sigmoid flexure of the colon, a little of the duodenum, and the whole of the stomach had passed and were lying in the left thoracic cavity, the intestines here being bound down by strong adhesions to the upper edges of the opening, some of the colon having a dark mulberry colour. The left lung was compressed upwards and backwards, and, though small, was healthy, and contained plenty of air. Old adhesions existed at its apex, and one strong band stretched across the colon from the anterior margin of the rent in the diaphragm to the base of the lung. The heart was displaced to the right side of the middle line of the sternum. An old fracture of the fifth rib (well united) was found. All that could be discovered in the uterus at the place of penetration was a broad dark line somewhat thicker than the surrounding tissue. The paper concluded by remarking on the probability of the stomach and the first portion of the duodenum, with

part of the omentum, having first escaped into the thorax, then continuing to perform their functions in their new abode till, on the abdomen being for a second time filled with a gravid uterus, a fresh intrusion of abdominal viscera into the chest took place.—A discussion then followed, in which Dr. Brunton, Mr. Sebastian Wilkinson, Dr. Fothergill, Mr. Cole, and the President took part, the speakers mostly being of opinion that the induction of premature labour would have saved the life of the patient, and alluding to the strange absence of peritonitis or of clots in the abdomen causing septicæmic poisoning.

The report on Dr. Griffiths' case of hermaphroditism, in which Dr. Wiltshire, after careful examination, considered the subject to be of the male sex, was then read, and the meeting adjourned.

# Reviews and Notices of Books.

*On Paralysis from Brain Disease in its common forms.* By H. CHARLTON BASTIAN, M.A., M.D., F.R.S. London: Macmillan. 1875.

WE are glad to welcome the republication, in a compact, well-printed volume, of the lectures which Dr. Bastian lately published in our columns. Their subject, paralysis from brain disease in its common forms, includes a large variety of morbid states of the encephalon, and these are discussed with admirable clearness in the eight lectures. These are intended to deal especially with hæmorrhage into and softening of the brain as causes of paralysis. The rarer pathological states of tumour, abscess, inflammations, &c., do not come within the scope of the lecturer.

We need not tell our readers how well the intention of these lectures is carried out in the excellent account they present of the causation and symptoms of hemiplegia. The author has been able to discuss every part of his subject in the light of a wide, practical, and scientific knowledge, and has availed himself fully of the important results obtained by recent continental workers. Much fulness of detail is precluded by the limited time at the disposal of the lecturer. Few cases are introduced, and these are rather to illustrate rare than common varieties, and are described briefly but clearly. The discussion of the subjects is not confused by any perplexing statements of the opinions of those who on certain points have arrived at conclusions different from those of the author, and the utility of the lectures to students must be thereby increased.

In the first two lectures on the Causation of Hemiplegia an excellent account is given of the immediate and remote influences producing the condition, some of which have hitherto received a degree of attention very disproportionate to their real importance. The collateral modes in which hemiplegic affections may be hereditary is discussed, and considerable space is given to the important investigations of Heubner and Duret on the distribution of the cerebral bloodvessels. In describing the symptoms Dr. Bastian discusses in detail the three common forms of onset—apoplectiform, epileptiform, and simple; and then considers the symptoms of a typical case, afterwards explaining more fully the varieties which differ from the common type. Bourneville's researches on temperature in hemiplegia are fully described, and a good and, to a considerable extent, original account is given of the variations in sensory affection and of interference with speech. The difficult question of regional diagnosis is the subject of the sixth lecture, while pathological diagnosis is described in the seventh.

We had marked many points of much interest in Dr. Bastian's account of the pathology of the symptoms in the several varieties of hemiplegia which are related to locality of lesion, but must refer for these to the lectures themselves, which our readers have already had before them. To one point, however, we may draw their attention—to the interesting association which Dr. Bastian finds between lesions of the pons Varolii and symptoms not commonly supposed to be connected with disease of that part. He agrees with Longet that the lower ganglia for sensation, "sense-centres," are situated in the upper part of the pons, and believes that as the lesion is situated higher up above these interference with sensation is less and less marked. Again, emotional weakness he believes to be especially associated with disease of the pons, the relation between the two being probably indirect. The theory of the connexion between nerve-nuclei, by which Dr. Broadbent explains the distribution of motor paralysis in hemiplegia, may, Dr. Bastian believes, be extended also to explain the absence of sensory impairment.

In speaking of pathological diagnosis, Dr. Bastian gives a lucid analysis of the diagnostic indication of the various causes of the apoplectiform state. The bearing of the pathological indications and general symptoms on prognosis is considered in the last chapter, the conclusion of which is devoted to the treatment of hemiplegia. In this Dr. Bastian has well summed up what is to be said on the therapeutics of brain disease. The small space (15 pages) which is devoted to this, in comparison with that occupied by symptoms and pathology (316 pages), indicates, we fear, only too accurately, how far our power of remedying the organic brain diseases must lag behind our knowledge of their causes and symptoms. Dr. Bastian has appended figures of the cerebral convolutions from Marshall and Turner, and of the circulation from Duret. In the nomenclature of the convolutions there are some differences in the figures which will be rather confusing to those unfamiliar with the topographical anatomy of the cerebrum.

## OUR LIBRARY TABLE.

*Vernon Galbray, or the Empiric;* the History of a Quack Dentist. Second Edition. London: Whitfield. 1875.—This little *brochure* is an attempt to convey wholesome lessons of truth under the guise of romance. It has for its object to expose the practices followed by a certain class of unqualified advertising dentists. The empiric in the story is a Dutch Jew, originally a clockmaker, but attracted to "mechanical dentistry" by the skill shown in the art by a half-witted *employé*. He comes to London, changes his name, employs various assistants, advertises largely, and for a time flourishes on his ill-gotten gains. The day of retribution comes in the discovery that he is really an empiric; he loses his house and wife at the same time, and retires from the scene disgraced. All this is worked up into a well-written tale, with enough of the romantic and sentimental to make it attractive to those for whom it is especially written. The author's object is a laudable one, and we do not think his fiction is devoid of a very strong basis of fact. Empiricism, such as he describes is, we fear, still too prevalent; but its day is passing. It rests with the public itself to complete the work of eradication of such practitioners.

*Aids to Anatomy.* By GEORGE BROWN, M.R.C.S. London: Baillière, Tindall, and Cox. 1875.—In a few pages Mr. Brown has drawn up some short tables of the most important facts in regional anatomy. This is a class of work which has been increasingly prevalent of late, and we must confess that we should far rather let the student compile his own tables than procure them ready made. Mr. Brown wisely points out that such works as his are by no means intended to draw the student from the dissecting-room. They have, however, all too much the aspect of a "cram" to render them very safe to trust in the hands of an idle student. The little book is well done.

*Manual of Materia Medica and Therapeutics.* By ALEXANDER MILNE, M.D. Third Edition, revised and enlarged by WILLIAM CRAIG, M.D. Edinburgh: E. and S. Livingstone. London: Simpkin and Marshall. 1875.—This is a handy little work of some three hundred pages, which many students will find of great use. It is systematically drawn up, and contains a considerable amount of information upon prescribing, &c.—points frequently disregarded in such text-books. The term "compound inflammables," used to designate the products of distillation, &c., does not strike us as a happy one. Why did not the author adhere to the simple division of chemical bodies into organic and inorganic?

*Lectures delivered in America in* 1874. By CHARLES KINGSLEY, F.L.S., F.G.S., Rector of Eversley, &c. London: Longmans. 1875.—That these lectures had a considerable interest at the time they were delivered we make no doubt, but the interest was of a passing kind, and they are not worthy of the fame of him who delivered them—a man of genius and noble character, who by his life and writings exercised a thoroughly wholesome influence on his generation, and did his best to make life happier and manlier than he often found it to be in his day.

*Chips from a German Workshop.* By F. MAX MÜLLER, M.A., Foreign Member of the French Institute, &c. Vol. IV.: Essays chiefly on the Science of Language. London: Longmans. 1875.—These chips from a German workshop deserve more attention than many of the finished pieces of work turned out from other literary workshops. The volume is dedicated to Dean Stanley, and contains his Introductory Sermon on Christian Missions. Many of the chips or essays consist of lectures or articles that have already appeared. The last two articles in the volume—namely, "My Reply to Mr. Darwin," and that headed "In Self-Defence," are very effective as specimens of the author's reasoning and writing.

*Higgledy-Piggledy, or Stories for Everybody and Everybody's Children.* By the Right Hon. E. H. KNATCHBULL-HUGESSEN, M.P. London: Longmans. 1875.—The title of this book is a happy one, and some of the stories are smartly and quaintly enough written, and their interest is not by any means limited to youthful readers, as we can testify. The stories are too much drawn out, perhaps, and the humour is sometimes too deep or forced to be at once appreciated; but when we remember the great difficulty of such writing, we are surprised the author has succeeded so well as he has done.

*Materialism.* With Appendix. By J. M. WINN, M.D., M.R.C.P., &c. London: Robert Hardwicke, Piccadilly. 1875.—This minute volume, the substance of which originally appeared in the *Journal of Psychological Science*, is devoted to the destruction of Dr. Tyndall's materialistic theories as enunciated by him at the meeting of the British Association at Belfast in August of last year. The argument is sound enough, but not concisely put. The objections are scored up in a rambling way, and want precision in arrangement. Dr. Wilks also comes in for a large share of criticism. But both article and appendix are worth perusal.

*Chemical Notes for Pharmaceutical Students, including the Chemistry of the Additions to the Pharmacopœia.* By A. RIVERS WILLSON. London: Baillière, Tindall, and Cox, King William-street, Strand.—This little book, according to the author, is to facilitate the study of the Pharmacopœia, and is intended to be read with that work, and may possibly be useful to students in preparing for examination. But it seems to us a somewhat incomplete and fragmentary production, giving an idea that the author, though industrious and painstaking in his work, has been somewhat premature in rushing into print on so important a subject as pharmaceutical chemistry.

## THE ARMY MEDICAL REPORTS.

THE fifteenth volume, embracing the statistical, sanitary, and medical reports of the Army Medical Department for the year 1873, has just been presented to Parliament. The volume is late in making its appearance, even taking into consideration the fact that the short official letter from the Director-General to the Secretary of State for War, which forms its preface, is dated October, 1875. If all the reports and papers were derived from the information and observations of 1873, we strongly suspect that the volume would be regarded in the light of a last year's almanack, but, while the statistical and sanitary reports are either altogether or mainly based upon the data of 1873, the Appendix includes various contributions and papers up to the date of publication.

Our readers are doubtless acquainted with the method of arrangement and the character of these Reports. We have, in the first place, a statistical report on the health of the troops serving in the United Kingdom, followed by similar reports on the troops abroad, in the various colonies, and in India. Short sanitary notes or comments, either in the shape of extracts from or abstracts of the sanitary reports furnished to the head-quarters of the department, are intercalated with the statistical data derived from the various stations, or rather appended thereto under their respective headings. Those articles dealing with special subjects, or those of a topographical, medical, surgical, or pathological character, are grouped together in an Appendix which forms a very considerable portion of the volume.

In the statistical section devoted to the troops serving in the United Kingdom, are notice papers on the prevalence of venereal diseases at the military stations from 1860 to 1874, and on recruiting and vaccination, to which controversialists on one side and the other will no doubt turn for the discovery of facts to suit their purpose. Stated broadly, the statistical evidence regarding the operation of the Contagious Diseases Acts shows that the amount of disease at the stations under the Acts amounts to only half what it is at stations not under the Acts. Among the subjects embraced in Sir A. D. Home's Report, we would call attention to that dealing with the health of the troops serving in the West Indies, more especially to the remarks on the sickness at Newcastle, Jamaica, and to the observations on sickness and mortality among European troops in India, especially with reference to enteric fever, which had been unusually prevalent during the year 1873.

Dr. Parkes's customary contribution, the Report on Hygiene for 1874, which forms one of the most notable and useful features of these volumes, is the first article in the Appendix. This is followed by one on the Ashantee Campaign, embracing the preliminary arrangements undertaken in this country, the arrangements and occurrences in connexion with the campaign itself, from its commencement to its termination, and a descriptive and illustrated report of the hospital-ship. Following this are two papers by Dr. Fleming, one on the Microscopical Examination of Potable Water of Cape Coast Castle, the other on the Fatal Cases in the Ashantee Campaign. One of these fatal cases is of a very curious and interesting kind. Surgeon-Major Porter contributes several papers descriptive of cases of Aneurism from Gunshot-wound; of Foreign Substance in the Œsophagus; of Psoas and Lumbar Abscess; and a short practical Note on Chloroform and Ether at Netley. There are two articles on Enteric Fever by Surgeon Page, 6th Dragoons, and Surgeon-Major Gore, M.D., respectively; a long topographical account of Bangalore, by Surgeon E. Nicholson; some short but very interesting Notes on the Andaman Islands, by Surgeon Douglas, V.C.; a lengthy and carefully worked out paper by Surgeon Welch; a Report on the Museum at Netley, and several other articles, with which we hope to deal more fully hereafter, our object being on the present occasion simply to indicate the nature and character of the contents of the volume.

# THE LANCET.

LONDON: SATURDAY, JANUARY 1, 1876.

THE first day of the new year—which, by the way, we hope will be a happy one to all our readers—reminds us that the holidays are over, and that we must brace ourselves up to new labour. Time was when we thought it right to give our readers something like a programme of the work of THE LANCET for the coming year, marshaling in succession all the great names of the profession as guaranteed to adorn and enrich our pages. We might do the same this year, having before us offers of Clinical Lectures and of Original Communications from the most eminent names in the profession, which, if completely realised, would leave the Editor and his staff little else to do than to make the best arrangement of his affluent materials. But of late we have not thought it necessary to issue a programme; and we shall best please our readers by giving slight hints to our contributors as to the kind of communications which are most acceptable.

The most acceptable sort of communication is that which is based on numerous and well-observed clinical facts having a practical or therapeutical significance. We retain our strong faith in medicine—we mean in the administration of well-selected drugs. We are not converts to the mint-water treatment of acute rheumatism. If we have lately made fresh discoveries of the curative powers of nature, we have also made fresh discoveries of the curative powers of medicine. To go no further back than our impression of last week, can anything be more remarkable than the profound effects on the nervous system of Gelseminum sempervirens detailed by Dr. SYDNEY RINGER and Mr. WILLIAM MURRELL? Is it conceivable that such powers should not have applicability to the temporary aberrations of nerve-function which constitute so much of the disease that comes before us? Where is the justification of speaking disparagingly of medicine, when it reduces temperature; when it dilates a pupil or contracts it; when it removes pain as by a magical process; when it alters the complexion and the composition of the blood; when it modifies the capacity of the cavities of the heart and the calibre and the contents of the various tubes of the body, such as the bronchi or the bowels or the bloodvessels; when it removes nodes; when it stops hæmorrhage, or alters in twenty-four hours the whole aspect of a skin eruption; when it suspends indefinitely epileptic seizures; and when it induces sleep? When medicine can be shown palpably to have such powers, it is but reasonable to expect year by year the discovery of new uses of it in the treatment of disease. Accordingly we shall look with a kindly feeling on all communications with a therapeutical bearing. It is unnecessary to say that we want no hasty inferences or false conclusions. It is easy to go wrong in estimating the therapeutical action of drugs; but of late the tendency to error has been rather in the direction of undervaluing medicines than of overestimating them. It is also superfluous to add that, as we should prize, most of all, communications showing modes of treatment that evidently curtail the duration of illness and the amount of pain, we should value as little inferior to these in importance papers which would show the fallacy of any accepted views or fashions of practice. We all fall more or less into routine modes of treatment, and no exercise is more beneficial to us as physicians than that we should be our own critics to test in all lights and ways the soundness of the conclusions we have arrived at and of the details of the treatment which we practise. Not the least advantage of such an attitude towards our own practice is that it makes practice so much more interesting. The most ordinary case of illness methodically studied—which, by the way, can be done with very little fuss or loss of time—becomes a lesson to us more instructive than mere books.

In saying all this, and expressing our strong faith in medicines as a vital part of the armamentarium of the physician, we have not the slightest intention of disparaging any other branch of medicine or medical discovery. Pathology and Etiology are still in their infancy, and we shall be disappointed if our columns do not this year contain many communications extending our knowledge in these great branches of Medicine. The department of Etiology embraces the whole subject of Sanitary Medicine, or medicine in its concern for the preservation of the health of individuals and of the community. The progress of civilisation has made it necessary for many medical men to abandon the practice of our profession, as ordinarily understood, and devote themselves entirely to finding out and removing the causes of prevalent disease. Some of the best men in our ranks are thus exclusively employed. The universities have provided special degrees and certificates for medical men who are willing to submit their knowledge in sanitary medicine to a special test. And it would be strange indeed if the medical press, and specially THE LANCET, should be backward in sympathy with those employed chiefly in finding out and removing the causes of disease. Before sanitary medicine was so fashionable as it is now, we had our own Analyses of Foods and our Commissions of Inquiry, and we are not likely to look on with diminished interest when so much development is being given to work which we ourselves began and do not mean to relinquish.

These are the views with which we begin the new year, and with the expression of which we hope in some degree to guide the work of the year. We have said nothing of what we might call the politics of the profession or of its ethics. We leave these to be discussed as occasion may and assuredly will arise.

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A CAREFUL and exact writer, in describing in 1870 in the "System of Surgery" the treatment of intussusception of the bowel, stated: "It is but rational to suppose that, in invagination of the intestine, operative interference holds out no prospect of relief, immediate or remote. The pathological conditions already discussed must satisfy the reader that such a conclusion is founded on substantial reasons." In 1873 an authority equally high and trustworthy, in commenting on a successful case of abdominal section for intussusception, spoke thus: "In conclusion, I

may briefly record my conviction that anyone who will carefully examine the evidence for and against will come to the conclusion that operations for the relief of intussusception are not only warrantable, but that in a large number of cases they are urgently demanded." The divergence of these statements, made by Mr. George Pollock and Mr. Jonathan Hutchinson respectively, exemplifies the change that has recently taken place in the opinion of practical surgeons respecting abdominal surgery. The brilliant results of ovariotomy, and the success that has attended the operation of gastrotomy for various purposes, had already done much to correct the exaggerated notions that formerly prevailed of the intolerance of the peritoneum of operative interference; but before Mr. Hutchinson had successfully performed abdominal section for intussusception of the bowels, few surgeons would have cared to recommend opening the belly for the reduction of an invaginated bowel, and fewer still would have ventured to perform it. Since then the operation has been done many times. Dr. Ashurst, jun., in July, 1874, collected thirteen cases in which abdominal section had been performed for the relief of intussusception, five of the cases being successful; and at a meeting of the Medical and Chirurgical Society held on the 14th ult., three cases, two of which recovered, were brought forward; while in the "Mirror" this week will be found the record of a case that was operated on by Mr. Royes Bell, but without success. Other cases have been published, but they have not yet all been collected together, so that it is difficult to form a true estimate of the average results of this operation. By a somewhat rough search we have been able to find a record of eighteen cases of abdominal section for intussusception, with eight recoveries; but the number of successful reductions was even higher than this. The question, therefore, that presents itself for consideration is, whether abdominal section may be regarded as a justifiable procedure for the relief of a particular class of cases of intussusception of the bowel after all other measures have failed. Does operation hold out a better prospect of recovery than leaving the case to nature? It is difficult, in the present state of our knowledge, to give a categorical answer to these questions. In the first place, we have no reliable data for comparison; in the next place, abdominal section is acknowledged to be inapplicable to the most urgent cases—namely, those in which the bowel is inflamed or strangulated; and, lastly, the actual condition of the invaginated tissues cannot always with certainty be foretold. Mr. Hutchinson has pointed out that the most hopeful cases are those in which the symptoms have persisted for some considerable time, and which denote incarceration rather than strangulation. On the other hand, it is well known that those cases which are most likely to recover are the milder and more protracted cases, and that reduction by position, injection, and inflation is only possible so long as there are no adhesions and no strangulation; while Dr. Brinton and Dr. Peacock have both shown that, even after strangulation has occurred and the intussuscepted portion has mortified, recovery not unfrequently takes place.

But, notwithstanding all the objections, real and hypothetical, that may be advanced against abdominal section, it must be acknowledged that there is a large class of cases of intussusception in which the ordinary remedies fail, and death takes place after a longer or shorter time from exhaustion and collapse, without peritonitis, and in which there is no difficulty in reducing the displaced bowel after death. Nor should it be forgotten that there is a danger that an incarcerated intussusception may at any moment become inflamed or strangulated, and ulceration and perforation of the intestinal walls be set up, so that the contents of the bowel escape into the peritoneal cavity and produce fatal peritonitis. With these contingencies always threatening, is it safe or prudent, it may be asked, to defer operative interference because the bowel has not yet become strangulated, or because recovery may take place even after strangulation has supervened? A full and complete answer is not possible until more data have been obtained. If a reference be made to the report published in our columns of the 18th ult., it will be seen that in Mr. Marsh's case, although death seemed imminent before the operation, the symptoms speedily subsided after the bowel had been reduced, which was done without any difficulty, and the patient made a rapid recovery. It would require a strong faith in the healing power of nature to believe that the patient would have recovered without operation, yet the bowel was neither inflamed nor strangulated. In Mr. Hutchinson's case, which was also a young child six months old, considerable difficulty was experienced in reducing the intussusception, although there were no adhesions. The child rallied after the operation, but death took place six hours afterwards, the post-mortem examination revealing evidence of recent extensive peritonitis. In this case it would appear that the operation had been deferred too long, the symptoms having lasted three days. If the operation had been performed earlier, there is good reason to believe that the termination would have been different. The case brought forward by Dr. Hilton Fagge and Mr. Howse was that of an adult aged thirty-three. In this instance the symptoms had lasted many days, and, though they were not very urgent, operation was decided on, and was accordingly performed by Mr. Howse, who found great difficulty in reducing the intussusception, and succeeded only by kneading the mass and pressing on the distal end. The patient recovered without a bad symptom. It is curious to note that both Mr. Hutchinson and Mr. Howse succeeded in reducing the invagination only by manipulation.

Seeing that if the operation be deferred too long, it may not only prove unsuccessful, but may add another danger, it becomes a matter of the first importance to determine what is the proper period to choose for the performance of the operation, and what are the indications that call for it. It has been laid down that the operation should be performed early in all acute and urgent cases, especially in infants under one year of age, if after a reasonable trial the ordinary measures prove unsuccessful, and in all chronic cases which present symptoms of incarceration only without any evidence of strangulation or inflammation. A very good indication of the urgency of the symptoms and of the gravity of the case is the occurrence of hæmorrhage, which is evidence of an amount of constriction on the invaginated portion of bowel sufficient to impede or arrest the venous

circulation in the walls of the gut, which necessarily precedes the occurrence of strangulation. It is therefore desirable, as Dr. HILTON FAGGE has insisted, to endeavour to anticipate the occurrence of the hæmorrhage. The operation should be performed at once if a moderate trial of the ordinary measures fail to reduce the invagination after the hæmorrhage has unequivocally declared itself. If deferred beyond this, there is great risk of the introverted portion of the bowel becoming so swollen and tense that it cannot be withdrawn; or inflammation and adhesion between the two serous surfaces may supervene, which would render the operation dangerous or impracticable.

It follows, therefore, that those measures are most likely to prove successful in intussusception of the bowel that are adopted early. Everything should be done, by quieting the action of the bowels, by attending to position, and employing manipulations, inflations, or cold injections, and cold external applications, to reduce the invaginated portion before it has been enlarged and swollen by the accumulation of blood and serous effusion as a result of constriction. If the symptoms still persist, there is, judging from the evidence before us, a good prospect of reducing the intussusception and saving the patient's life by means of abdominal section, provided that the walls of the bowel or the peritoneal covering be not inflamed or adherent. That death may and often does take place without the supervention of inflammation or strangulation has been abundantly shown by the records of many post-mortem examinations, and for such cases it may be stated with confidence that abdominal section will be found a valuable and comparatively safe procedure. It is scarcely necessary to say that in all cases the signs of intussusception should be unequivocal before so serious an operation as abdominal section be undertaken.

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A GLANCE at the report we gave last week of the business transacted at the last meeting of the Council of the Royal College of Surgeons will show that that body has lately been applying itself with diligence to the consideration of some very important matters which concern the relations that exist between the members of the profession and those who are about to enter it and the College as an examining and licensing body. The establishment of a separate Board of Examiners is now an accomplished fact, the significance of which can scarcely be exaggerated. Whatever may be said about the position and influence of the Royal College of Surgeons of England, and whatever hopes be indulged in of the advent of a Conjoint Examination, it should not be forgotten that the College of Surgeons is practically *the* Licensing Board for England, and will doubtless remain so for some time to come. The action of the Council of the College is closely watched and sometimes narrowly criticised by all who are interested in medical education, whether constituents of the College or not. It is not surprising, therefore, that much dissatisfaction has been felt at the manner in which the members of the new Board of Examiners have been appointed. On the 6th of November last, in an advertisement which announced that the Council would in December proceed to the election of the Examiners in Anatomy and Physiology, it was stated that the Board of Examiners would consist of nine members to be elected from the Fellows of the College. It was understood that there would be nine *bonâ fide* appointments; and, in answer to that advertisement, twenty-eight gentlemen either applied for or were nominated to the office of Examiner in Anatomy and Physiology. The Committee on Examinations in Anatomy and Physiology—consisting of Messrs. HILTON, HANCOCK, and MARSHALL, together with the President and two Vice-Presidents—recommended the Council to elect the nine Fellows whose names we published last week. It appears, however, that out of the nine members of the Board of Examiners five were already members of the Court of Examiners—a position which they still continue to hold. In other words, every member of the Court of Examiners who wished to be also an Examiner in Anatomy and Physiology, has been appointed. It may, therefore, be inferred that if four other members of the Court of Examiners had also desired to be members of the Board, they would have had no difficulty in making their election sure. Nor are there, as far as we know, any rules or bye-laws to prevent the Board of Examiners being made up entirely of members of the Court of Examiners, whereby the intention of the new regulations may at any time be effectually defeated. It must be borne clearly in mind that the objections that are raised are to measures, not men. Even those members of the Court of Examiners who have now obtained seats on the Board are or have been known as teachers of Anatomy or Physiology, although there may appear to be some inconsistency in the fact that, of three of the nine examiners in Anatomy and Physiology, one is a retired senior surgeon and another is the present senior surgeon at the largest metropolitan hospital, while the third is senior surgeon at the next largest hospital. It may be urged that it is only natural that these gentlemen, all of whom have had considerable experience in examinations at the College or elsewhere, should be jealous of the honour and dignity of the first professional examination at the College, and that they should hesitate to throw all the responsibility of conducting that examination on the shoulders of younger and untried men. This anxiety for the welfare of the College is doubtless commendable as far as it goes, but these gentlemen will now see that their zeal was mistaken. Mr. SAVORY and Mr. T. HOLMES are the two members of the Court of Examiners to whose election as examiners in Anatomy and Physiology no objection can be raised. The former as a physiologist, the latter as an anatomist and editor of "Gray's Anatomy," are worthy representatives of the Court of Examiners, and should have been left to share the responsibilities and honours between them. There is another matter that calls for immediate attention from the Council of the College. Physiology requires a fuller recognition at the College examinations, and we trust that the Council will speedily adopt some measures whereby this may be ensured. When this has been settled there will be still other questions pressing for consideration. The mode of conducting the examinations and the periods at which they are held are matters that will sooner or later have to be taken in hand and decided upon.

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THERE is a practice growing up among justices of sending children of tender years to prison for short periods and then to a reformatory, for offences which, a while ago, would have been felt to be adequately punished by a sound whipping. We are not about to express any strong opinion as to the wisdom of this new method of asserting the majesty of the law in the estimation of small criminals; but we do venture to suggest that it is at best a rough and empirical, if ready, way of dealing with an evil of undoubted magnitude and the greatest gravity. It is, unfortunately, only too apparent that the multitude of cases like that of SUSANNAH SPEAR, cropping up lately, indicates a terribly luxuriant undergrowth of vice and perverted wilfulness among the juvenile population. Cases of this class do not arise spontaneously, or even occur as isolated instances of depravity: they are the obtrusive outgrowth of a bed of foul and bitter roots of evil, which, springing up, must trouble society, and work dire mischief. The reform of individual offenders, if reform be practicable and accomplished, will do nothing towards eradicating the underlying evil. A few weeks ago Dr. MAUDSLEY called attention in our columns to a case in which stealing was, in his opinion, a symptom of disease—that familiar malady, General Paralysis. No psychologist can for a moment doubt that deterioration of the moral sense does occur as a consequence of disease—either purely mental or commencing in the organism upon and by which the mind works, and reacting upon the intellect and what, for want of a better name, we call the "conscience." But there is something more than this, which even scientific psychologists are too prone to overlook. Beyond all question there is a distinctly "progressive development" of "ideas," particularly that secondary class of ideas formed in the mind by the simplest processes of reasoning, and which comprises the notions of "mine" and "thine," of "right" and "wrong," of "kindness" and "cruelty," of "like" and "dislike." The development of this important class of inferential notions, which as a matter of fact govern the conduct of the individual with regard to the persons and things surrounding him, is subject to laws expounded in the system of comparative sciology popularly known as "Darwinism." The circumstances and conditions which determine the growth or non-development of particular organs and attributes of the physical animal have their counterparts in analogous causes and effects operating or produced in the mental conformation. For example, what we term "civilisation," by creating and instituting social safeguards for the preservation of life and the protection of property, deprives a civilised people of the savage stimulus which calls into daily use, and therefore into prominence, those more brutal instincts and propensities which man possesses in common with the lower animals, but living in an organised society and under a system of police he does not commonly require. The keen sight and quick ear, the faculty of detecting the presence of danger or the proximity of prey, and the vigorous predatory instinct which characterise the wild tribes of men, are absent in the citizen, in obedience to the law that an organ or faculty not called into use remains undeveloped. What happens to the body happens also to the mind. While, on the one hand, we find atrophy of the moral instincts, moral sense, moral principles, occurring as a symptom of a disease which impairs the instrument through which the mind acts, and leaves them to dwindle away; on the other hand, they remain undeveloped, unless specially cultivated, under conditions which do not naturally call them into existence. New virtues, new vices, new habits of thought, new propensities, are developed by civilisation, and some of the virtues and excellences of moral character which flourished under different conditions languish amid the circumstances which now surround the mind, and which not only mould but determine the mental and moral characteristics.

No very startling change has, perhaps, passed over our social institutions during the last quarter or third of a century, but there has been little short of a revolution in education. The competitive system is the crowning stone of an edifice built up on a plan possessing little in common with the educational architecture of five-and-thirty or five-and-twenty years ago. It is the working out of a principle of judging by results, regardless of the processes by which an effect is produced. The simplest illustration will best serve to elucidate the point we want to bring out. Thirty years ago much stress was laid on the way in which the spelling of a word was accomplished; each syllable was built up, and one added to another until the whole word was produced. Now, if a child can rattle off the consecutive letters, without the smallest concern as to the part they play in producing the etymological result, it is held to be quite sufficient. The same far-sighted but purblind policy governs the training of the moral character. A child who does not happen to steal so as to be discovered, who is not detected in lying, or who, by accident or ingenuity, passes for "good," is supposed to be quite strong enough to resist what is called "temptation," and is credited with sufficient moral stamina to maintain an upright bearing through all the vicissitudes and perils of social life. We must be excused for thinking that the neglect of moral training in detail and the practice of judging wholly by results are producing a bad stock, or—to speak, as we believe, more scientifically—are leaving the normal moral character imperfectly developed. The conditions of our social life and intercourse do not call the faculties of honour and honesty into such vital prominence as some other states of life—possibly counted lower in point of civilisation,—and there is the greater need of specially cultivating and training these faculties. This cultivation and training are increasingly neglected; and it is worth considering whether the frequent occurrence of cases such as those which have recently taxed the skill of lawmakers and administrators and caused grave anxiety to all social observers, is not a sign of the times pregnant with warning and suggestion. It would be a calamitous accident if the spread of a belief that the practice of stealing is a symptom of disease should play into the hands of that demoralised class of persons, unhappily very largely represented in all grades of society, who are ever seeking some excuse for wrong-doing. It would, we contend, be a social misfortune if, because a man or woman may possibly be suffering from some mental or brain disease, he or she should be relieved from the sense of personal responsibility. Instead of setting up this plausible excuse for crime, it would be better policy to recognise and grapple with the need of devoting

special measures to the culture of those moral attributes which are frequently never developed at all, or, when they are, readily fall into a state of atrophy on the first invasion of paralytic disease. The faculty of honesty can scarcely ever have been robust in a case where it is one of the first to droop and fail before the encroachments of a disease like general paralysis. In like manner, it is highly improbable—setting aside the consequences of hereditary taint—that the faculty of honesty can be under proper cultivation in the case of a growing child one of whose earliest exploits is to give ingenious direction to propensities which she enjoys in common with the cat, the raven, or the magpie. It is idle to suppose that anything except evil weeds will grow apace without husbandry. Nevertheless, practically, it is not too much to say that the moral training of children has substantially fallen into desuetude; and under the mischievous influence of a recent bias in favour of purely "secular" education, the neglect of an obvious natural duty has risen to the dignity of a political craze.

For the reclaiming of individual children like the girl SPEAR, life in a reformatory, granted that the institution answers to its name, may be the best remedy. But it must not be supposed that the redress of a general grievance by measures applied in particular cases can ever put an end to the real evil. You may lop off and destroy all the present fruit of a deadly plant, but the root remains, and will infallibly produce more of its kind. If the evil of which these cases are the outcrop is to be checked and brought under control, measures must be directed to remove the underlying cause. That cause we take to be a non-development of those attributes of the properly organised mind which are the safeguards of social life and the sources of individual happiness. This non-development is the converse of the premature failure, decay, or atrophy which occurs when the same attributes succumb before the inroads of paralytic disease. We have already stated that when these faculties droop so readily there is the strongest reason to believe they were never robust. The failure of development we trace to neglect of moral culture. We contend that this neglect is increasing, and we warn society that the recovery of particular offenders will not atone for the systematic wrong management of the race.

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A SPECIMEN of exceptional importance from an etiological point of view was brought before the notice of the members of the Pathological Society at their meeting on Dec. 7th. It was a typical example of cirrhosis of the liver, taken from a child ten years of age, who had been under the observation of Dr. GRIFFITHS, of Swansea, for the past five years. The liver was hard and tough, weighing only fifteen ounces. The granulations on its surface were fully developed, so that its "hobnailed" appearance was very characteristic. It was an obvious specimen of simple cirrhosis, or "gin-drinker's liver," and was accepted as such by all the members present. This disease is so seldom met with in children that many observers are sceptical as to its existence, and most of the text-books on the diseases of children make no reference to it. Chronic atrophy of the liver, as a part of or induced by protracted tubercular disease, syphilis, mechanical congestion, or occasionally ague, is sufficiently well known and recognised by most pathologists; but it was quite evident that in this case none of these causes could be admitted. The question of chief interest, therefore, was whether the great cause of cirrhosis in the adult—namely, alcoholism—had been the exciting agent in this child; and it was to this point that Dr. GRIFFITHS had paid particular attention. After a careful investigation, which was the more satisfactory from his having been acquainted with the parents and their mode of life, he was compelled to abandon this idea, and so leave the cause of his patient's affection unexplained. There certainly seems no reason to doubt his having made a thorough inquiry into the habits of the child, although some of the members who were present were scarcely prepared to admit this, and in their remarks laid great stress on the difficulties attendant on the investigation of a matter of this kind. In the cases mentioned during the discussion by Drs. MURCHISON and PARKER, the possibility of alcoholism being the exciting cause was much more apparent, and its discovery was not surprising. Dr. MURCHISON's suggestion, that from the great activity of the liver at this early period of life a relatively small quantity of alcohol would be liable to induce the disease, seems to us to require some proof, and to have few arguments in its favour. If cirrhosis were, in its essence, an affection of the liver-cells, we could understand that slight causes might be sufficient for its production in children; but as its primary element is the overgrowth of connective tissue, which is more commonly attendant on degenerative processes, we should *a priori* anticipate that some powerful and long-continued cause had been at work in these cases. That simple cirrhosis of the liver is invariably alcoholic, is an axiom with many pathologists; but we cannot help thinking that this case materially strengthens the doubt with which others regard this question. The attempts which are occasionally made to bring these exceptional examples into an alcoholic classification are scarcely warranted. For instance, one gentleman seriously suggested that the child might have taken steel-wine medicinally, and that this had caused the cirrhosis, in apparent forgetfulness of the vast quantities of this drug that are daily taken by numbers of children; and yet cirrhosis in infancy is a pathological curiosity. Cirrhosis of the liver is occasionally met with in young lads who have not been exposed to alcoholic influences, as is explicitly mentioned by FRERICHS in one of his cases; and we are inclined to believe the statements of some adult patients who deny intemperate habits, although such assertions must always be received with extreme caution. BUDD's idea that other products of faulty digestion may be the excitants is worthy of remembrance, although in very few cases only can we suppose that the hot spices of curries, which he condemns, have set up the disease. That we have not yet grasped all the causes of simple cirrhosis of the liver is, we think, beyond a question. Its having been found in the cow by CARSWELL, and in the pig by BUDD, is particularly important, and cannot be satisfactorily disposed of on the alcoholic theory, even if these animals had been fed on "brewers' grains" impregnated with alcohol—a gratuitous assumption, of which there is no proof whatever. In large towns many animals—cows especially—habitually consume this food, and yet cirrhosis of

the liver is almost unknown among them. Moreover, F. WEBER has described a case of typical cirrhosis in the newly-born infant, to which no exception can apparently be taken. Under these circumstances it is surely very unscientific to rush to a conclusion that every "hobnailed" liver is due to habits of intemperance. The conditions and antecedents of connective-tissue proliferation in other organs—such as the lungs, kidneys, and muscles—are so numerous and so imperfectly understood that we cannot but consider it very rash, in our present state of knowledge, to limit ourselves to an exclusively alcoholic origin of simple cirrhosis of the liver; and such an opinion is the more to be deprecated as it must prevent any further investigation into its etiology.

# Annotations.

"Ne quid nimis."

## UNQUALIFIED ASSISTANTS AND RECOVERY OF FEES.

A THOROUGHLY satisfactory judgment has been given in the Clerkenwell County Court in a case where the plaintiff, Mr. E. Godfrey Purcell, L.R.C.P. Edin., &c., of Southampton-street, Strand, sued Mr. George Jackson, of Pentonville, for two guineas for services rendered through an unqualified assistant named Edward Gater. The defendant objected to pay on the ground that he had been deceived by Gater, who undertook the medical care of his wife in her confinement, and afterwards of the baby, till it died at the age of a month. It would appear that Mr. Purcell, living in Southampton-street, has a kind of chemist's shop fitted up at 123, King's-cross-road. The defendant's wife, seeing the plaintiff's name over this establishment, went in to engage him to attend her in her confinement. Mr. Purcell never visited them till the baby was dying, when he is said to have called, looked at the baby for a moment, and left the house again. On being applied to for a certificate of death, Gater said he could not give one himself, but would get one from Mr. Purcell. The defendant was thereupon led to suspect Mr. Gater's non-qualification, and decided not to pay the fee, as he felt he had been deceived. In cross-examination Gater said he was registered as an assistant, but was not qualified. The judge said that neither Mr. Purcell nor his assistant had any legal claim upon the defendant, and he should therefore give judgment in favour of the defendant, with costs. Nothing will have a more healthy effect in stopping this system of carrying on distant branch practices by unqualified assistants than such judgments as this. Let it once be known that no legal claim can be made for services so rendered to the public and the system will be likely to collapse. Such a system is thoroughly discreditable. It misleads the public, who are led to think that they are getting regular medical attendance when they are not, and it operates injuriously on brother practitioners.

## MADE-HOLIDAYS.

HOLIDAY-MAKING never appears to less advantage than in the production of made-holidays. Everyone must sympathise with the desire to provide for the public enjoyment; but the mere fact of creating a blank day, and turning the population loose in streets where all the shops are shut except those which supply intoxicating drinks, is not providing for the public enjoyment. The net result of Bank-holidays made by Act of Parliament is dispiriting, and provocative of nothing so much as an excess of drunkenness. No one who walked through the streets on Boxing-day, for example, can have been greatly surprised to find persons more or less inebriated plentiful in all districts. In a word, not only were the temptations to drink thrown into startling prominence by the melancholy aspect of the streets; there was really little else for the holiday-maker to do than drink and drown his sorrow. We do not complain of what has been done, but we think the Legislature should go one step further, and, having enacted that the population shall not work, should provide some public entertainment by which the people may be able to play, or at least be kept out of mischief. It would be no great hardship if the troops located in the metropolis were called out to perform for the general amusement, if the military bands were allowed to play in the parks, and some serious attempt were made to get up an interesting and popular pageant or spectacle. In a word, these holidays should either be so arranged as to fall on days when there is something for the public to see and do, or special amusements should be provided. Dreariness, weariness, waste of money, waste of time, waste of health, are the conditions brought about by the so-called "holidays" made by the half-measure now in force. If London had been a city visited with the plague, or under the ban of the Church, it could scarcely have presented a more lugubrious spectacle to the average holiday-maker than was offered throughout the last of our made-holidays.

## STAMINA OF RECRUITS.

A SIGNIFICANT paragraph which appeared in a late number of the *Pall Mall Gazette* on the subject of re-engagement by short-service men has probably directed attention afresh to the condition of the army. But without the knowledge that only four, out of more than a hundred, men enlisted for short service—six years' with the colours, and a lounging pension of fourpence a day in the "reserve" for six years longer—are willing to re-engage for further service, no reasonable person can doubt that Lord Cardwell's ingenious "reconstruction" of the land forces so as to form "one harmonious whole" has been a failure. It was, in point of fact, a feeble reproduction of the system tried and abandoned at the commencement of the present century, and a business-like inquiry into the records of recruiting preserved at Chelsea Hospital would have sufficed to show the folly of repeating an abortive experiment. There is, however, a phase of the present perplexity in which we are specially interested. New "recruits" must be found. We say *new* recruits because, as a matter of precision, six years' men are no better than recruits, although possibly entitled to the distinction of being termed *old*. Rather than employ and pay soldiers, properly so called, we attempt to preserve the semblance of an army on paper by providing six years' casual maintenance, and six years' idleness on a pension—just large enough to form an excuse for lack of industry, and not sufficient for honest support. Meanwhile it is unnecessary to depreciate the raw material of the army, such as it is, by neglect or, worse, abandonment, of the known physiological tests and precautions in the selection of recruits. If laxity as to chest measurement is permitted while age is still insisted upon, the raw material obtained must be of an inferior description. If a youth of twenty years measures a due girth round the chest, the measure being allotted to the height on physiological principles, the circumstance shows that he is a specimen of the animal *homo* worth training. If, on the other hand, being of the regulation age, he is only a little less well developed in the chest, the probabilities of health are immensely reduced. He, in fact, belongs to a totally different class of youth. It would be intelligible

that medical officers should be instructed to be lax on the point of age—that is to say, on the side of youth,—while they were rigorous in the requirement of full chest measurement; but laxity in the latter respect is simply indifference to the public interests and the integrity of the service. We trust somebody high in the medical service will have the courage and fidelity to protest. In any case the Secretary of State for War should not be left to count as able-bodied men weedy youths with no stamina, and, what is worse, without the physical possibility of hereafter acquiring that essential characteristic of the useful soldier. A while ago there was an outcry against sending youths of nineteen years to India. A youth of nineteen with full regulation measurement is surely more likely to stand training and climate than one of twenty with the same girth and no more.

## INSURANCE OF INFANTS BY FRIENDLY SOCIETIES.

THE questionable policy of allowing the principle of life insurance to be used for the purpose of giving parents a pecuniary interest in the deaths of their children has, with certain restrictions, been again formally recognised by the Friendly Societies Act of 1875, which received the Royal assent on August 11th last, and will come into full operation on January 1st, 1876. Section 28 of this Act provides that "no society shall insure or pay on the death of any child under five years of age any sum of money which, added to any amount payable on the death of such child by any other society, exceeds six pounds, or on the death of a child under ten years of age any sum of money which, added to any amount payable on the death of such child by any other society, exceeds ten pounds." It is further forbidden that any society shall pay any sum on the death of any insured child under ten years of age except to the parent of such child, or to the personal representative of such parent, and upon the production by such parent or personal representative of a certificate of death issued by the registrar of deaths, containing certain particulars specially enacted. In order that friendly societies may have some means for carrying out the restrictions laid down by this Act, certain troublesome duties and responsibilities are put upon registrars of deaths, in consideration of which they will receive a sum not exceeding 1s. for a death certificate, for which, under other circumstances, they would be entitled to receive 2s. 6d. or 3s. 6d. It is provided that every certificate to be applied for the purpose of obtaining a sum of money insured on the death of a child aged under ten years, shall be endorsed by the registrar, with a statement of the name of the society, and the amount for the payment of which the society is liable. Further, that all certificates of the same death to be used for a similar purpose are to be numbered by the registrar in consecutive order, and it is enacted that no registrar shall give any one or more certificates of death for the payment in the whole of any sum exceeding £6 on the death of a child under five years, or £10 on the death of a child under ten years. These precautions, if strictly carried out, will doubtless serve as a useful check upon illicit insurance of infants and young children, but having regard to the amount of trouble imposed upon the registrar, and the all but nominal fee to which he will be entitled, we must confess that we doubt whether the provisions are not of too complex a character. There is, however, a further provision which says that no registrar shall issue one of these special certificates unless the cause of death has been previously entered in the death-register on the certificate either of a coroner or of a registered medical practitioner, "or except upon the production of a certificate of the probable cause of death under the hand of a registered medical practitioner, *or of other satisfactory evidence of the same.*" This is an undoubtedly important clause, and, as regards the strong incentive it holds out to parents to provide medical attendance during the illness of insured infants and young children, deserves most cordial approval; but the precautions are weakened, if not destroyed, by the latter part of the clause allowing the registrar's certificate to be granted upon the production of a medical certificate of the cause of death signed by any registered medical practitioner, or of *other satisfactory evidence of the same* in cases where the cause of death in the register is uncertified. The inquiries are naturally suggested, What medical practitioner who has not been in attendance during the last illness of a child, is in a position to give a certificate of the cause of its death? what *other satisfactory evidence* of the cause of death can possibly be given without an inquest? and, lastly, by what mode of reasoning the drawer of this Act can have come to the conclusion that a registrar of births and deaths is a fit person upon whom to put the responsibility to decide what is "satisfactory evidence" of the cause of death? We can scarcely believe that these new and ill-considered duties have been imposed upon registrars by this Friendly Societies Act with the sanction of the Registrar-General, who would probably agree with us that a registrar ought not to be called upon to decide as to what is "satisfactory evidence" of cause of death in cases where no registered medical practitioner has been in attendance during the last illness, and in which no inquest has been held.

## NOTES ON FIJI.

STAFF-SURGEON ADAM B. MESSER, of H.M.S. *Pearl*, has contributed to the last Report on the Health of the Navy some interesting particulars as to this recently acquired colony. The Fiji islands are about 255 in number, 80 of which are inhabited. The most important are mountainous, rising to from 2000 to 4000 ft. above the sea level, with unusually large rivers and correspondingly extensive deltas at their mouths. The present white population is estimated at 2000, 1700 of whom are British subjects, and the rest German and Americans. The mean temperature of the year at 8 A.M. ranges from 78·9° to 80° Fahr., and the prevalence of strong trade winds throughout the greater part of the year, together with the detached insular arrangement of the land, has a powerful influence in moderating the temperature of the air as measured by the thermometer. There is no doubt that hitherto Fiji has been extraordinarily free from tropical diseases. Yellow fever, cholera, ague, and remittent fever are unknown, rheumatism is rarely heard of, and venereal diseases are very rare indeed, as intercourse between the Fijian women and the white men is almost unknown, and white women of a certain class are as yet seldom found. "Kava" drinking, a vile habit copied from the natives, induces some amount of delirium tremens. Influenza is said to be occasionally endemic, and is then productive of considerable mortality among the natives. Diarrhœa and dysentery are, in fact, the only diseases at all common or severe in this colony, and they seldom assume an epidemic form. The most active agent here, as elsewhere, in the production of dysentery, seems to be the water, which, in periods of dry weather, becomes scarce and strongly impregnated with decomposing vegetable and animal impurities, which evil is increased by the utter neglect of all sanitary laws and precautions. A special form of skin disease called "coka" exists to some extent among the natives. It is non-febrile, "consisting of numerous ulcerated tubercles, raised considerably above the level of the skin, and situated most commonly about the angles of the mouth, but also affecting all parts of the surface of the body. The

tubercles vary in size and shape from a pea to a kidney bean, and may number from two or three to as many as fifty in the same sufferer." The author remarks that children under three years old are almost invariably found more or less affected with it, but that it is simply a filthy skin disease kept up by the ignorance and prejudice of the natives. Elephantiasis is somewhat common among the natives of certain islands in the group. As regards the effects of the climate on the white population, it appears that the resident settlers, as compared with newcomers, are distinguished by a spareness of frame, a somewhat sallow complexion, and a hard keenness of expression, akin to the American type. Fat white men are rare in Fiji, whereas fat natives are the rule. The possibility of rearing white children has not as yet been fairly tested, but all mothers give evidence as to the rarity of sickness among their offspring, and as to their stout, strong, and ruddy aspect. There are about 120 men, 200 women, and 250 children, of half-caste race in Fiji. The men are a fine, well-grown race, but the women somewhat inferior. It is not likely, however, that as civilisation increases the race will ever become of much importance in the islands. No particulars are furnished in this paper as to the epidemic of measles that occurred at Fiji some nine months ago, as the report was closed at the commencement of the outbreak.

## AN IMPROVED METHOD OF APPLYING THE MICRO-SPECTROSCOPIC TEST FOR BLOOD-STAINS.

DR. RICHARDSON, of Pennsylvania, who has paid so much attention to the size and characters of the blood-corpuscles, both red and white, has recently read a short paper before the biological and microscopical section of the Academy of Natural Sciences, in which he suggests an improved method of applying the micro-spectroscopic test for blood-stains. He points out the difficulties that are experienced in the ordinary mode of its application, and then proceeds to give the following directions: Procure a glass slide with a circular excavation in the middle, and moisten the edges of the cavity with a small drop of diluted glycerine. Thoroughly clean a thin glass cover, about one-eighth of an inch larger than the excavation, lay it on white paper, and upon it place the tiniest visible fragment of a freshly dried blood-clot, which need not weigh more than the 25,000th of a grain. Then with a cataract needle deposit on the centre of the cover near the blood spot a speck of glycerine not larger than a full stop ( . ), and with a dry needle gently push the blood to the brink of the microscopic pond, so that it may be just moistened by the glycerine. Finally, insert the slide upon the thin glass cover in such a manner that the glycerine edges of the cavity in the former may adhere to the margins of the latter, and turning the slide face upwards, transfer it to the stage of the microscope.

By this method an extremely minute quantity of a strong solution of hæmoglobin is obtained, the point of greatest density of which is readily found under a one-fourth objective, and tested by the adjustment of the spectroscopic eye-piece. Dr. Richardson states that in one case, five months after a murder had been committed, he was able to obtain well-marked absorption-bands, easily discriminated from those produced by a solution of alkanet root with alum and those caused by an infusion of cochineal with the same salt, from a scrap of stained muslin one-fiftieth of an inch square. After examining the spectrum, the white corpuscles and the remains of the red corpuscles may be discovered by the use of high powers, and it is possible, he thinks, in this way, by measurements carefully made, to discriminate between the corpuscles of human blood and those of the ox, pig, horse, and sheep. Lastly, to make assurance triply sure, he proceeds to wipe off the tiny drop of blood-solution from the glass with a thin piece of moistened blotting-paper, and allow to fall upon it a little fresh tincture of guaiacum and then a drop of ozonised ether, which will at once evoke the deep blue colour of the guaiacum test for blood.

## EXPLOSIVES IN THE METROPOLIS.

IT is gratifying to know that on and after this 1st of January, 1876, gunpowder, fireworks, ammunition, nitro-glycerine, and other explosive substances can only be kept within the limits of the metropolis by licence of the Board of Works. It would also be reassuring, but that no more "registration of premises," and official circulation of "printed instructions," can possibly suffice to protect the public from peril. There is, probably, only one effectual safeguard against danger—viz., the creation of a monopoly entrusting the storage and retail supply of explosive substances to old soldiers and sailors, who have been trained to the careful handling of these dangerous materials. Some time ago it was thought that a great measure of safety had been achieved when petroleum jars were ordered to be labeled with the information that at 100° Fahr. that substance gives off an "explosive" vapour. The grotesque idea of an ignorant apprentice, in one of the dirty little shops where petroleum is allowed to be sold, spelling out the label with the aid of a lighted candle in a dark cellar, was the first consequence suggested. We fear, unless something more than mere red-tape precautions are taken with regard to licences for gunpowder and nitro-glycerine, the creation of "registered magazines" in our crowded thoroughfares will not in any very great degree conduce to the public contentment. The Metropolitan Board of Works undertook the management of the London Fire Brigade some years ago. We have yet to learn that the Brigade has been less costly or relatively more efficient since the accounts were kept at Spring-gardens. We entertain the highest respect and admiration for the Board which undertakes everything that can be called *work* in the metropolis, but we confess that the bare fact of an urgent matter being undertaken by the Board does not instantly dispel all anxiety or even misgiving. The notification that premises can be registered at the small cost of one shilling is not in itself comforting. We should like to hear that the "gunmakers, ironmongers, oilmen, and other persons," who desire to keep explosives on sale, would be required to do something more than pay one shilling, and receive "printed instructions," which may or may not be honoured by their perusal.

## AN ANCIENT EGYPTIAN WORK ON MEDICINE.

EBERS, the German archæologist, has made an interesting discovery of what is said to be a portion of one of the lost Hermetic books of medicine. Hitherto all attempts to trace the origin of the reputed Hermetic writings have failed, and it has been assumed that the great "Hermes" was a mythological personage invented by the earlier alchemists to credit the acquired knowledge with the authority of antiquity. The manuscript when thoroughly deciphered may throw some light on this doubtful point, but, even if it fails to do so, the fact that a fragment of the lost learning of the Egyptians has been recovered is a matter of scientific interest. The manuscript was discovered among the bones of a mummy some years ago by an Arab, and on his death it was offered to Dr. Ebers, who eventually purchased it at a considerable price. It consists of a single sheet of papyrus, about sixty feet in length, and the characters are in red and black ink. Judging from the characters, the date of the manuscript may be placed about

1500 B.C., making it 3300 years old; and, if written in the earlier part of the century, it would have been contemporaneous with the period of Moses's residence at the court of Pharaoh. Only a portion of the document has at present been translated by Ebers, including some of the headings of the various chapters, such as "the secret book of the physicians," "the science of the beating of the heart," "the knowledge of the heart as taught by the priest-physician Nebseeht," "medicines for alleviating accumulation of urine and of the abdomen." There is every reason to suppose that the Egyptians attained a high degree of scientific knowledge at a very early period of their history. As Boerhaave aptly remarks, the fact that Moses knew how to reduce gold to powder, so as to render it miscible with water, and by this means potable, shows he had acquired a knowledge of chemistry only to be attained by the highest masters in the art. Indeed, Egypt seems to have been the birth-place of chemistry; for, according to Plutarch (*Is et Osir*), in the sacred language of the priests the country was called Χημία, which means, according to Bochart, hidden or secret knowledge. At the present day it is still called, we believe, by the Copts, the land of Kemi. Lindas has suggested that a knowledge of this art was introduced into Europe by the Argonauts, who sailed to Colchis to carry off the Golden Fleece. The Colchians, according to Herodotus, were an Egyptian colony, and Lindas supposes the Golden Fleece to have been a book written on sheep-skin, teaching the method of making gold by the chemical art. The date of the Argonautic expedition was, according to most chronographers, 1250 B.C., or 300 years later than the supposed date of Ebers' manuscript. It is to be hoped that future researches may bring to light further evidence of the scientific history of the past, and so enable us to estimate the degree of civilisation and scientific attainment reached by the early races of mankind.

## DEATH-RATES IN ENGLISH AND SCOTCH TOWNS.

ALTHOUGH the area of Scotland is very little short of twenty millions of acres, its population scarcely exceeds that of registration London, and is less by more than half a million than that of what is now known as greater London. In Scotland the area is equal to nearly six acres to each person, whereas in London the estimated population averages nearly 46 persons to an acre. According to the last Quarterly Return of the Registrar-General of Scotland, the annual death-rate during the three months ending September last was equal to 20·7 per 1000 in the whole of Scotland, while in London it was 21·5 per 1000. In the group of Scotch districts called insular-rural the death-rate was as low as 13·8; in the eight principal towns it was 23·5, and in other large towns 25·5 per 1000. The eight principal towns of Scotland contain rather more than a third of the entire population of the country, and the death-rate, 23·5, scarcely differed from the average rate in the eighteen large English towns, 23·8 per 1000. The death-rate from the seven principal zymotic diseases during last quarter was 0·5 per 1000 in the eighteen English towns, and 5·5 in the eight Scotch towns. If we exclude diarrhœa, the rate from the remaining six diseases was 2·7 and 3·5 respectively in the English and Scotch towns. The fatality from measles, scarlet fever, diphtheria, fever, and whooping-cough, was higher in the Scotch than in the English towns, whereas the death-rate from small-pox was highest in the English towns. As regards the death-rate from diarrhœa, it was equal to 3·8 per 1000 in the eighteen English towns, while it did not exceed 2·0 in those of Scotland. Among the eighteen English towns the death-rate from all causes during the last quarter ranged from 19·2 in Portsmouth, to 31·3 and 32·4 in Leicester and Salford. The rates in the eight Scotch towns ranged from 17·3 in Aberdeen to 25·2 in Glasgow, 25·3 in Paisley, and 32·4 in Greenock. The high death-rate in Greenock was entirely due to the fatal prevalence of zymotic diseases, especially of typhus, enteric fever, whooping-cough, scarlet fever, and measles. During the month of September no less than 81 deaths in Greenock were referred to the seven principal zymotic diseases, being equal to so high an annual rate as 14·5 per 1000.

## NIGHT SENTRIES.

IT was with much gratification that we read the very sensible letter of "Sentry," in *The Times* of the 29th ult., and we have no hesitation in saying that it indicates a simple and practical way to a very necessary army reform. We have been ourselves struck, as probably most people have, with the utterly wasteful expenditure of labour and the loss of health involved in the apparently purposeless posting of a number of sentries—here, there, and everywhere—about our royal palaces and public buildings in London. Considering the increasing difficulty in maintaining the brigade of Foot Guards at their proper strength, and in face of the fact that the losses, by death and invaliding, among this fine body of men from pulmonary diseases are disproportionately large, it seems to us obvious that the number of night sentries should be reduced. When commenting some years ago on the causes of pulmonary disease among the Foot Guards, we urged that the exposure to the cold and wet of our climate, and the wear and tear of constitution from loss of rest at night, entailed by sentry duty, largely contributed to the production of these lung diseases. Our climate is notoriously uncertain and treacherous, and the changes of temperature would prove very trying to the constitution of anyone who had at one time to encounter the biting east wind at the corner of a street or the damp cold of a London park, and at another the hot stuffy air of a military guard-room. We are a long way from desiring to develop a spirit of "coddling" in the services, but we think, on the grounds of common sense even, and apart from medical considerations and experience, that young soldiers cannot be deprived of their night's rest and subjected to the exposure of sentry duty with impunity as far as their health is concerned. It seems to us that great discretion and economy should be displayed in this matter of sentries, and living as we do under a Conservative Government, it is quite in keeping with common sense and present policy to conserve the health and strength of our soldiers by diminishing what we believe to be a most unnecessary expenditure of both in the multiplication of sentries. And it would be well to take the case of the Foot Guards in this respect to begin with.

## THE SANITARY CONDITION OF GUNNISLAKE.

GUNNISLAKE, in the parish of Calstock, Tavistock Union, Devonshire, has an evil reputation. Its sanitary condition, as that of other villages in the same parish, was made the subject of inquiry by the Privy Council in 1861 and again in 1871. Both inquiries disclosed a disgraceful state of filthiness and inattention to the common decencies of civilised life, of which the normal results were undue prevalence of fatal enteric fever and other preventable diseases. We learn from the *Western Morning News* that Gunnislake has again been the scene of a formidable prevalence of enteric fever, no less than 50 cases of this disease having occurred within a short period among a population less than 3000 in number. The outbreak is assigned to pollution of the water-supply of the village by excremental matters washed into a supply reservoir by recent heavy

rains. So far as we can make out, the sanitary state of the village has been in no way improved since the inquiry conducted for the Privy Council by Dr. Blaxall, in 1871. Surely this is a case for some imperative action on the part of the Local Government Board.

## THE HEALTH OF THE ARMY AT HOME AND ABROAD.

THE departmental Blue-book of the Army Medical Service furnishes a summary, in a tabular form, of the sickness, mortality, and invaliding, and the proportion constantly non-effective from sickness per 1000 of mean strength of the troops at home and abroad during 1873, as compared with the preceding ten years. From this we are enabled to collate the following information.

Out of the troops serving in the United Kingdom in 1873, calculated on an annual ratio per 1000 of mean strength, 759·2 were admitted to hospital, 25·26 discharged as invalids, and 8·28 died; while during the preceding ten years, 1863–72, the numbers were 866·1 admissions, 29·02 invalids discharged, and 9·25 deaths. Turning to stations abroad, we find that in 1873 the admissions to hospital were 1314·7, the deaths 16·25, those sent home as invalids 39·13, and those discharged as invalids 10·22. For the ten years preceding, the admissions were in the ratio of 1496 per 1000, the deaths 24·96, those sent home as invalids 41·03, and 18·93 discharged the service as invalids. At Gibraltar and Malta the ratio of admissions, deaths, and discharges as invalids, was less than the average from 1863 to 1872 inclusive; and, speaking generally, the ratios of sickness, mortality, and invaliding at all the foreign stations during 1873 compare favourably with those of the previous ten years. In some instances this is striking, as at China and the Straits Settlements, where the ratio of deaths in 1873 was 15·07, and the discharges as invalids 10·11, per 1000, while in the previous ten years the deaths were 42·28, and the discharges as invalids 32·96, per 1000 respectively. At Ceylon the death ratio had diminished, but at the Mauritius it had increased, during 1873 as compared with the average for 1863–1872.

## THE CONJOINT SCHEME CONFERENCE.

THIS Conference met again on the 23rd ultimo. The representatives of the Apothecaries' Hall were present. All the parties concerned in the project were represented. Things seemed ready for a decision, but no decision was come to. The Conference stands again adjourned to the 14th of January.

THE Howard Association is making renewed efforts to obtain a reformation in the relations of crime and insanity, and is reissuing the manifesto which was circulated under its auspices in 1869. This manifesto is signed by several "alienists" of eminence, and since there can be no doubt that some rearrangement of the law as regards crime and insanity is very urgently needed, we trust that the question will receive the attention of Parliament in the forthcoming session. As all the facts brought forward by the Howard Association have frequently been commented upon in our columns, we do not deem it necessary to recapitulate any of them now.

A MANIFESTATION of the febrile state known as "Malta fever" occurred some time ago on board H.M.S. *Hibernia* while occupying the naval barracks at Malta. The fever is generally supposed to be caused by exposure to the sun, imprudence in diet and drink, with want of proper rest at night. But it is stated that in many cases it cannot be traced to any of these causes.

A FORM of self-injury and malingering among criminal prisoners was described a short time ago before one of the medical societies of New York which should not be overlooked in instances where it is necessary to determine speedily whether a person is suffering from natural or self-induced indisposition. It was found that prisoners were in the habit of introducing tobacco into the rectum, with the effect of reducing the pulse, occasionally to such an alarming degree as to necessitate the immediate suspension of the labour on which they were engaged. The ingenuity of criminals confined in our own gaols often requires the closest scrutiny to detect and defeat imposture. The kind of effort to evade work reported from New York is as dangerous a one as can be well imagined, and perhaps would not be persevered in did experimenters know that weak solutions of tobacco injected for hernia—a practice in vogue some years ago—have produced death within a few hours.

A REPORT recently published by the Government of India on the sanitary condition of Rajpootana presents gratifying evidence of the energy and success with which the English medical officers perform the multifarious duties devolving on them, and of the material progress which the State continues to make. The ravages of disease are curtailed year by year, while judicious and persistent teaching has convinced the native peoples of the immunity from epidemics secured by hygienic measures. In especial, the benefits of vaccination are becoming widely recognised by all castes. Some interesting information is given regarding the guinea-worm, which, like other maladies, has its epidemic seasons, although the laws regulating its attacks are not yet understood. It was observed that elevated hills were quite free from it, and that washing in the slimy or dirty water of wells is *not* the cause of the disease. A recurring appearance of the worm is expected, and closer investigations are promised.

MEDICAL MEN, as is too often proved, run considerable risk of contracting zymotic disease while discharging such duties as the inspection of defective drains and sewers. Instances of the loss of valuable professional lives from fever-poison absorbed in this manner will present themselves to our readers. Laymen are not exempt from dangers of the nature pointed out, although they are specially incidental to the calling of the medical practitioner. We learn with regret that Mr. Henley, one of the inspectors of the Local Government Board, is suffering from a serious attack of fever caught very lately in the discharge of official duties.

THE American *Medical Record* states that the Health Board of New York is endeavouring to ascertain the different localities on the built-up portions of the city subject to malarial troubles and to the diseases in which the element of periodicity is sufficiently well marked to cause suspicion. A map of the city has been sent to each medical practitioner, with the request that he will indicate the precise situation of each case of the sort which he may be called upon to treat, and transmit to the Board any observations which he is enabled to make in the matter.

IN London, last week, 1603 deaths were registered, including 56 from measles, 85 from scarlet fever, 9 from diphtheria, 71 from whooping-cough, 20 from different forms of fever, and 12 from diarrhœa. To diseases of the respiratory organs were referred 444 deaths, a figure showing a considerable declension on the previous returns. The London Fever Hospital contained last Saturday 124 patients, of whom 109 were under treatment for scarlet fever.

IT appears that a new Improvement Act is being supported, if not promoted, by the Mayor of Southport, which proposes to incorporate Birkdale with Southport, and to give the municipal authorities further power to improve the sanitary and general condition of the town. It might easily be imagined that the Mayor would thus have earned the gratitude of his townsmen, but unfortunately municipal extension and improvement mean expenditure of money and increased rates, and thus we are told that several letters have been received by this official threatening his life if he does not withdraw his support to the proposed new Improvement Act, and keep down the rates of the town! One letter contained a sample of powder and shot. The path to sanitary reform is not always strewed with roses, and in this thriving watering-place it would appear to be a more than usually rugged one.

A VERY singular instance of protracted incubation of fever has lately been officially reported. A lady in excellent health sailed from the Mauritius for England, where, after an interval of about six months, she became the victim of a most severe attack of typical Mauritius fever, to which she very nearly succumbed. The surgeon in attendance, in reporting the case, says:—"The lapse of six months surpasses all established ideas on the subject; while at the same time, by proving that disease germs can be carried inert in the system for such a long time, it will account for many an outbreak, as well as for isolated cases of fever of doubtful origin having been hitherto in many instances traced to a wrong source."

FROM the report of the inspectors of lunatic asylums in Ireland for the year 1874 it appears that the ratio of lunatics to the general population was 2·14 per 1000, this average not being uniform throughout the country. In Down, Armagh, and Galway the ratio was 1·50, in Dublin, Louth, and Waterford 2·50, and in Limerick as high as 3 per 1000. With reference to the working of the district asylums, the inspectors say:—"We are enabled to report in favourable terms if their utility as great public institutions is to be estimated by results embraced within recoveries and improvements, a diminished mortality, immunity from accidents, smaller current outlay, and last, though not least, their moral as well as their fiscal management."

A LARGE number of persons who had met with accidents or injuries in the streets have been treated at the metropolitan hospitals within the last few days. At this season of the year, when there is such a vast amount of drunkenness prevailing, a considerable influx of casualty cases is expected at these institutions, and arrangements are made for the reception and treatment of injured persons. At St. Thomas's Hospital nearly a hundred cases of street accidents have been attended to, few of them, however, being of a serious nature. Treading upon orange-peel on the pavement was assigned as a cause of the mishap in many cases.

DR. ATTHILL has resigned the vice-presidency of the College of Physicians, Ireland, and Dr. Hayden has been appointed to the vacant position.

DR. WARBURTON BEGBIE, of Edinburgh, has presented the Royal Medical Benevolent College with a donation of £105.

WE regret to have to announce the death of Deputy Inspector-General C. W. Pickering.

# REPORT
## OF
# The Lancet Commission
## ON
# LUNATIC ASYLUMS.

## COLNEY-HATCH ASYLUM.

### THE HOUSE AND ARRANGEMENTS.

THE Middlesex County Asylum, at Colney Hatch, is a colossal mistake. It is much larger than any building of the class not erected in blocks ought to be. It combines and illustrates more faults in construction and errors of arrangement than it might have been supposed possible to find concentrated in a single effort of misdirected or bewildered ingenuity, while as an institution for the care and cure of the insane it is organised on a system elaborately heretical in conception, and based on principles and a notion of the object in view—and of the best mode of compassing it—which we believe to be wholly false, impracticable, and disastrous. All this is especially remarkable, because the asylum is scarcely more than five-and-twenty years old, and was erected and constituted subsequent to the discovery that madness is a malady calling for professional treatment no less directly and urgently than any form of ordinary disease; and that a county lunatic asylum, to be really serviceable to patients and economical to the ratepayers, should be a hospital properly so called, and in no sense either a workhouse, a refuge for imbeciles, or a prison for refractory paupers. There can be no question as to the general intention, with this qualification, however, that the Middlesex Magistrates and their Committee of Visitors seem from first to last to have been unduly influenced by the consideration that they were not at liberty to incur any large expenditure for objects of doubtful benefit, they being themselves the judges as to the benefit likely to accrue from any provision they could be asked to make for the comfort or cure of the insane. As might have been expected, this well-meaning but mistaken mode of procedure has entailed an expenditure ultimately greatly in excess of a reasonable first outlay. Colney Hatch has, we should imagine, cost more in alterations than it did in original construction, and in the end it is an asylum which can never be satisfactory as a hospital, and which a bold but true economy would hand over to some other purpose with the least delay. It is impossible to deal honestly with an institution like that which now engages our attention without daring the risk of apparent discourtesy. Let us at once speak frankly on that point, and then, unflinchingly, to business. We mean no reflection on the humanity of the Middlesex Board, on the energy of the Committee of Visitors, or on the zeal and skill of the medical superintendents, but the impressions left by our inspection of Colney-Hatch Asylum are the reverse of encouraging. Looking at the facts, as we must, from the independent professional standpoint, it is incumbent to say that in our judgment the house and arrangements are equally unworthy of the object to which they have been dedicated—the treatment of the insane. The story of Colney Hatch from 1851 to the present time would be the recountal of a struggle between science and self-sufficiency, between officialism and common sense, between a loyal and earnest desire, on the part of all sorts of discordant and conflicting authorities, to do right and good work, and the distracting and obstructive influence of muddle-headed humanity and red-tape. It would require the pen of the author of "Pickwick" and the courageous sagacity of a Conolly to place the facts in their true light, to colour them with all their natural hues and rational force, and to carry

conviction to the minds of men whom we are quite sure need only to see the case as others see it in order to secure their instant support for the largest and boldest measures of reform. What we have to say about the building—and it will not be much—may be said more conveniently after the way has been cleared by the observations required by the system and arrangements.

Colney-Hatch Asylum is not a *medical* institution. It can scarcely be described as claiming that character. It is not controlled by the medical superintendents. The Committee of Visitors exercise supreme authority, and the medical officers, with more or less docility, carry out their instructions. If the Committee of Visitors approve a method of treatment as likely to be useful "towards promoting the recovery of the patients," they urge or "continue to urge it on the attention of the medical superintendents." For example, "the Committee, *aided by their officers*, constantly encourage the patients in the pursuit of healthy out-door employment and amusement,"—that is, because "the Committee" happen to consider "healthy out-door employment and amusement" will promote "the recovery of the patients." If, on the other hand, this Committee of laymen, presumably ignorant, and beyond all question legally incapable, of the treatment of patients suffering from mental or any other disease, do not chance to approve a particular line of practice, "they *direct* that such practice shall for the future be entirely discontinued." Generally, it would seem, "the superior officers faithfully carry out the directions of the Committee with reference to the management and discipline of the establishment." When, however, they fail in the discharge of this duty to their superiors, the Committee reprimand or dismiss them at will. In a word, the asylum is managed by the Committee. The medical officers are regarded as a superior order of subordinates; the only remedies for mental disease—namely, the daily surroundings, the discipline, and the moral *régime* of the patients—are ordered and administered by the Committee and their officers. The medical superintendents are tolerated, consulted or ignored, persuaded or coerced, as appears good to the presiding lay authority, or as their own habit of submission or self-assertion may render possible. We make these statements solely on the basis of the published reports; they are inferences, nothing more. We have been careful not to ask any leading questions in the asylum, and we shall be quite prepared to hear that the gentlemen who respectively fill the offices of "medical superintendent of the male department" and "medical superintendent of the female department" indignantly repudiate the imputation that they are not supreme. Nevertheless, the inference holds good, and we assume the responsibility of making it. It is the only one deducible from the reports, which are public property. Take a small but significant example of the way the system works. The Committee appoint a medical superintendent to each department, and a matron. "Seclusion" commends itself to the wisdom of the lay Committee as a measure, under certain circumstances, useful towards "promoting the recovery of patients." This being so, the ward attendants, as "subordinate officers" of the Committee, may place a patient in seclusion, with this provision only, that, *having* inflicted the punishment or administered the remedy, notice must be at once given to the medical superintendent, and that "superior officer" has the power, if he pleases, to undo, as far as it is possible to undo, what the attendant, as an officer of the Committee, has in his discretion and by the authority of the Committee accomplished. The lay Committee by their lay officials treat the case, and then call in the medical officer to endorse or amend the unqualified use of measures which are the proper and only agents of psychological medicine. Nor is this all. At the same moment when the female attendant sends her written notice to the medical officer, that she has locked up his—or more correctly speaking the Committee's—patient, she sends a similar notice to the matron, who, like the medical superintendent, is a "superior officer." Now, suppose the matron arrives first, and approves of the powerful "treatment" administered by the attendant, what position does the medical superintendent occupy when he appears on the scene, and perhaps disapproves of, and countermands, the remedy? It must be remembered that all these people, from the Committee down to the attendants, consider themselves concerned in the "treatment" of insanity, and of course qualified for the practice in which they are engaged. We think there can be only one opinion in the outside profession as to the system which this small matter may serve to illustrate, and the situation to our own mind acquires fresh gravity from the circumstance that the controlling authority of the Committee over the so-called "medical superintendents" is obtruded on the notice of attendants and patients by regulations, wholly unnecessary, and, considering the nature of the institution and the mental characteristics and susceptibilities of the inmates, incapable of justification. It may seem a small matter in itself, but no one having any experience in the task of acquiring and exercising a useful personal influence over the insane will fail to see the importance of a rule which absolutely compels the medical superintendent to sign a book in each ward during his daily visit in order to attest his fidelity in the discharge of routine duty. A straw will show which way the wind blows, and just as the parade of the Middlesex warder uniform operates on the mind of the criminal or ex-criminal lunatic in a manner destructive of the notion that he is in a hospital to be cured, and not in penal confinement, so the knowledge that his medical superintendent is after all only a "superior officer," and not the supreme authority, detracts from the complete establishment and maintenance of that moral control which not only forms an integral part of the treatment of insanity, but is itself the principal feature and basal element of the therapeutic *régime*. It is not necessary to restate the propositions we laid down on this point in the report on Hanwell. The evil we exposed and deplored at the last-named asylum attains its full development at Colney Hatch. We do not desire to insinuate, nor do we suppose, that the Committee of Visitors interfere vexatiously with the management of the institution or the medical treatment of the patients. On the contrary, the medical superintendents warmly acknowledge "the disinterested labour of the Committee, and their willingness on all occasions to give effect to the suggestions of the superior officers for the well-being and improvement of the asylum." It is not even necessary to raise the question whether the Committee may not sometimes be right when the medical superintendents are wrong. What we do assert, and with all the energy of strong conviction, is that the constitution which makes the Committee supreme, and renders the medical superintendents their "superior officers," and nothing more, is unsound in principle. It proceeds on the assumption that the lay Committee are the licensed keepers of the asylum, that the care and treatment of the insane are in their hands, and the medical attendance is incidental. Whereas it should be the medical authority that controls everything in an asylum for mental disease, for the simple and obvious reasons that disease of the mind is amenable only to the influence of moral remedies, and the discipline, the control, the daily routine and management of the insane are the "drugs" with which the physician of the mind must work the cure of his cases. A lay committee has, in point of fact, no place or authority in an asylum except to carry out the instructions of the "medical superintendent" in the matter of provision for the housing, feeding, and clothing *his* patients in accordance with the scheme of treatment laid down by him, as a skilled psychologist employed and commissioned to treat a particular form of disease. This is the initial proposition of the argument in favour of a scientific system of mental medicine. It is recognised in Surrey, and is in force in the asylum upon which we reported on the 4th of December last. It even receives an equivocal sort of recognition at Hanwell. Why should it be ignored or perverted in every detail of the system in operation at Colney Hatch? We make no apology for speaking thus freely. The question raised is of vital moment to the cause of scientific progress and the interests of mental medicine. It is one in which the medical profession as a body has a direct concern, and in which every practitioner of psychological medicine must feel his *status* immediately involved. It is also, and in the largest measure, a public question. We cannot suppose that the ratepayers of Middlesex desire the pauper lunatics of that county to be treated by a committee of laymen, however humane and intelligent. It is abundantly evident that the Legislature does not contemplate the maintenance of huge private asylums, administered by unskilled committees, out of the county funds. The interests of science and the obligations of true economy alike require that public asy-

lums should be "hospitals" under medical management, and this principle must be asserted until it finds the fullest acceptance in Middlesex as elsewhere.

It would be quite impossible, within the limited space at our disposal, nor is it necessary, to describe the building at Colney Hatch. We have already alluded to its magnitude as a fault. The unskilled observer would probably be impressed by a general air of magnificence. It needs some knowledge of the inner life and working of an asylum to inform the outsider that "magnificence" is one of the most fatal characteristics of a hospital for mental disease. A magnificent home for decayed industry; a magnificent school for the youthful waifs and strays of the population; a magnificent reformatory, or prison, or possibly even an asylum for idiots or imbeciles—provided always that the quality of magnificence in the last case does not imply height—may signify no incongruous ideas; but a magnificent asylum for the insane means, and must ever mean, the crowding together of cases which ought to be kept apart. In the report of the medical superintendent of the male department, as far back as 1865, we find Dr. Sheppard remarking: "For myself, I have never yet been able to discover that there is any advantage in associating a number of persons (whether insane or otherwise) for sleeping purposes in one room." The occasion which called forth this observation was a protest on the part of the Commissioners in Lunacy against the remodelling of associated dormitories into single rooms—a measure obviously necessary in itself, but which the Commissioners apparently questioned on the ground of increased difficulty in efficiently supervising a large number of cases which called for constant watching. The dilemma will illustrate the evil inseparable from these vast asylums. If the patients are associated they excite each other and confirm their malady. If they are separated they cannot possibly be kept under proper care; and the difficulty is quite as great by day as by night. It must not be supposed that quiet wards are always so managed as to conduce to the recovery of their inmates. The practice of telling off the victims of mental disease in herds and dealing with them in droves is not "treatment." It may save trouble. For a time, and at the first blush, such a policy may seem to save expense, but just as it is cheaper to spend a pound a week for six months in curing a case of disease, than to support the patient uncured for years at a cost of only ten shillings a week, it is always true economy to make the question of cost subsidiary in the treatment of recent cases of mental disease. A glance at the tables we have already published will suffice to show that a very large proportion of curable cases of insanity are cured within six months of the attack. We maintain that for six or twelve months new cases should be everywhere dealt with individually at any reasonable outlay, and on this system the country will assuredly save money. Individual treatment is wholly out of the question—it is simply impracticable in a large asylum. The most the medical officer can do is to attempt some rough classification of his cases, and the result is, as often as not, disastrous to the patients it is meant to serve. A visit to some of the "refractory" wards at Colney Hatch must convince any unprejudiced but careful observer that the effects of such classification are not satisfactory at that institution. The conditions have been greatly improved since 1864, when the Commissioners reported as follows:—"It would be difficult to instance more perfect examples of what the wards of an asylum for the insane should not be than are presented here by what are called the refractory wards, especially those in the basement of each division, constructed originally so as to exclude the light from those portions of the corridors where it is most required." "The gloom" has ceased to be "unrelieved by comforts of furniture" and other appliances. Everything that benevolence, sympathy, and growing intelligence can suggest—except the sweeping, but perhaps wise, measure of pulling down the building and reconstructing it throughout anew—has been done to improve, not only the "refractory wards," but most of the asylum. Nevertheless, we repeat, it is the last place in the world where we should wish to see a female friend placed under treatment for insanity; and it cannot by any stretch of charity be described as a hospital for mental disease. That patients recover at Colney Hatch, as they do elsewhere, in spite of the conditions by which they are surrounded, our abstracts and analyses of the medical statistics will prove; but it is no less true that these conditions are undesirable, and that they ought to be radically and promptly amended. There is no lack of space at Colney Hatch; but some of the wards are decidedly crowded. The ventilation is good—except in the closet-arrangements, which are scanty and defective—the drainage satisfactory, the water-supply fairly abundant and pure. The furniture of the wards is sufficient and comfortable. Decorations and objects of interest, pictures, ornaments, birds, musical instruments, and books are liberally supplied and widely distributed. The food is good, though not well managed or nicely served. For example, the Australian meat is neither properly cooked nor tastily seasoned. The clothing, as pauper clothing goes, is decent, the bedding clean, and the general arrangements satisfactory. But with all there is an oppressive air of discipline and dreariness. The two ideas seem to mingle in a single conception. Here and there a little nook or bay in a ward awakens the impression of homeliness; but one step off the carpeted floor into the long cheerless apartment and the illusion is dispelled. The Committee and the medical superintendents are evidently engaged in an earnest and praiseworthy endeavour to improve the character of the place; but they struggle against difficulties which must in the end prove unconquerable. The greatest good for the greatest number is the only possible aim in an asylum of this magnitude and constitution, and, we repeat, mental diseases cannot be treated as a heterogeneous mass of mutually antagonistic idiosyncrasies. The case is lost in the classification; individual characteristics indicative of the personal developments of disease are obliterated in the process of throwing together and treating in mass the victims of a malady which ought, above all other morbid affections, to be dealt with directly in the unit. It is no doubt true that a medical officer may sometimes be found who possesses in an exceptional degree the faculty, so to speak, of taking a mental photograph of his patients, and not only recognising them in the crowd, but recalling to memory much of the history and many of the special symptoms of their cases. We have seldom met a gentleman in whom this power attains more remarkable development than Mr. Marshall, the medical superintendent of the female department at Colney Hatch. But this does not in the least modify the opinion that it is unwise to crowd, and wholly impossible to treat, cases of mental disease in these vast establishments. It may be supposed cheaper, but even this notion is a short-sighted blunder. Not only are recent maladies that ought to be cured allowed to drift into the chronic and incurable stage, to the ruin of individual lives and happiness,—but patients, who are *paupers* only because they are insane, become permanently chargeable to the rates, when direct personal treatment in an asylum of moderate dimensions would have spared the individual a life of suffering and ignominy, and saved the public the trouble and expense of his or her maintenance.

Nothing would be gained by criticising in detail the domestic and disciplinary arrangements at Colney Hatch. It seems strange, remembering how modern the asylum really is, to find much in the internal construction, the fitting and furnishing, and the general regulations, which belongs to an earlier era in the custody and treatment of the insane. But it is not less remarkable to recognise the spirit and liberality with which many reforms have been carried out. It must never be forgotten how much the most trivial change in an establishment of this magnitude involves. The alteration of a window or door, the cutting down of a bedstead, the stencilling of a wall, or the slightest improvement in the number or quality of articles of general use by the inmates, entails the instant multiplication of cost by many hundreds. It is due to the Committee to state once for all that they have in large measure conquered the impulses of "economy," falsely so called, and that, short of taking the best and boldest step of all, they have spared neither pains nor expense to render the building habitable and its arrangements conducive to the general comfort and contentment. Notwithstanding the unsatisfactory character of the institution, it would be difficult to point out special evils which call for immediate redress. Speaking generally, the wards are gloomy, long, narrow, and comfortless, the staircases cramped and cold, the corridors oppressive, the atmosphere of the place dingy, the halls huge and cheerless. The airing-courts, although in some instances carefully planted, are uninviting and prison-

like. The warder-like uniform is seen everywhere, and the sense of being in gaol must be present to the mind of an inmate more frequently than the thought or perception of home or homeliness. There are kindly attempts to relieve this inevitable impression. For example, many of the patients have little plots of ground allotted to them in the garden for the cultivation of flowers, and no effort is wanting to make their lives tolerable. Dr. Sheppard, the medical superintendent of the male department, has devoted much time and energy to the organising of a very complete round of amusements and entertainments. To the benevolent and scientific enterprise of the same gentleman the curative repertory of the asylum owes the signal advantage of a well-constructed, though small, Turkish bath. Of this we shall have more to say under the head "Treatment," but the provision calls for passing notice here as a conspicuous proof of the progressive energy of a "superior officer," and the liberality of the real superintending authority of the asylum, the Committee. The recreation hall is capacious, and duly provided with a stage for theatrical performances. The chapel is large, and, by the way, Ritualistic. We shall have something to observe on this point when we come to speak of religious services for the insane, at the close of our inquiry. That will be the fitting time to discuss the question whether it is desirable to make the function of public worship in these institutions simple and congregational, crowded as they are with persons of every way of thinking, or to place them on the level of spectacular entertainments. It is beyond question that a musical service must be especially interesting and useful to the insane, but it is quite possible to make a service musical without giving it a character symbolical of the tenets of an extreme party in the Church, with which the great body of Englishmen have little sympathy. It is only fair to say that we have not been present at a service in Colney Hatch, and that our notion of its character is deduced entirely from the fittings of the chapel. It may be that it is not so "extreme" as we suppose. Meanwhile the matter is one of much importance. The religious services of institutions of this character form an integral part of the moral treatment, and ought, in our opinion, to be distinctly in unison with the plan of treatment adopted by the medical superintendents. Whether this is the case at Colney Hatch we have, for obvious reasons, considering the constitution of the asylum, intentionally omitted to inquire. The service of the attendants is a matter of the first moment, but one upon which it is almost impossible for the casual visitor at an asylum so extensive to form any trustworthy judgment. Looking to the records of dismissal and changes, we should fancy the Committee—again "the Committee"—must have great trouble with their *employés*. Perhaps this may in some measure arise from the circumstance that for a lay committee to select, engage, or dismiss the attendants on patients at an asylum is just as unreasonable as it would be for the lay committee of a hospital to select or appoint a surgeon's "dressers." Attendants on the insane do not stand in the same relation to their patients as nurses in an ordinary hospital, more particularly at an asylum such as Colney Hatch, where a great deal is practically left to attendants, where these officials consider themselves officers of the lay committee, and where it is within their discretion to administer that most formidable of "remedies"—seclusion. If the constitution of the asylum should ever be reviewed by the Board of Justices of Middlesex, and it is placed on the only intelligent and intelligible footing of a hospital for mental disease, this anomalous relationship and consequent position of matters will be rectified. Meanwhile we can only deplore its existence as part of the fruit springing from a corrupt and bad root. Criticism in detail is manifestly inadmissible. Great improvements have been carried out in late years, including the provision of better baths, which have rendered it possible to abandon the dirty and even dangerous practice of bathing more than one patient in the same water. Increased attention has also been directed to the vital necessity of efficient night-watching. It is not easy to see how the surveillance can be effectual, but it is said to be, and perhaps it is. In any case the Committee appear satisfied, and the Commissioners in Lunacy complain less vehemently than in years past. The proportion of attendants to patients is roughly, excluding inspectors, head attendants, and night-watchers, one to thirteen. The "wet" and "dirty" cases are perhaps unavoidably numerous. The number of paralytics, imbeciles, and epileptics is considerable. The weekly charge for patients was 9*s.* 11*d.* in 1874.

The pressure on our space and the length of this Report compel us to defer the topics of "Treatment" and "Results" until next week.

[*Corrections in the Report on Hanwell Asylum*, Dec. 18th, 1875.—In the section on "The House and Arrangements," second paragraph, thirty-third line, for "*The use of* ordinary medicines," &c., drop the words printed above in italics, and read "Ordinary medicines," &c. In the section on "Treatment," the deficiency in return of cases and instances of "Seclusion" for certain years specified was not due to any reluctance to furnish the fullest information at the Asylum, but to an error of date in the questions we proposed. The omission is not material.]

## PROFESSOR SANDERSON ON THE PROCESS OF INFLAMMATION.

### LECTURE I.—PART I.

THE annual course of lectures appointed to be held in connexion with the now well-known Brown Institution have just been delivered before a large and appreciative audience at the University of London.

The first lecture took place on the 15th ult., and dealt chiefly with John Hunter and the influence exerted by his doctrines and experiments on the subject of inflammation both at the time he taught and since. Dr. Sanderson stated that, in passing in review the various doctrines which had been current to explain the inflammatory process, he proposed, in the course of his lectures, to show what considerable modifications were necessary in those views which he himself propounded in the article on Inflammation in the second edition of "Holmes's System of Surgery." Two years ago he had chosen for his subject the Febrile Process; and he then endeavoured to show that the commonly accepted notion that fever is a condition of the organism in which chemical processes go on to a greater extent than in health is erroneous and opposed to fact; for, when actually measured, fever is found to be a state of the organism in which the mechanism is hampered and its powers impaired or diminished. Inflammation might be studied in the same way; and Galen's aphorism, that "inflammation is fever of a part," still holds true, for, indeed, the tendency of recent researches is to bring back the doctrines—first, that fever is injury of the whole organism; and, secondly, inflammation is injury of a part. The word "inflammation" was applied when the ordinary chemical views prevailed; but it would be unwise to alter this denomination. It is the function of pathology to connect the knowledge gained by experiment with that of past and present experience, and to translate the conclusions arrived at into the language of the bedside; and it is never expedient to abandon the old nosological words which form a link between the past and the present, between pathology and practice, experiment and experience.

The process of inflammation consists in a series of changes due to an injury inflicted on a part. It is not an effort of nature, but a material and physical effect of a definite cause. This conception of inflammation, as a mere injury or spoiling of tissue, has still to struggle with the doctrines of teleology. In studying any process the first thing to be done is to resist such teleological tendency. Thus an inflamed part has no more *intention* to heal than has the injuring agent any intention to hurt. Whether inflammation be studied from the theoretical or the practical side, it is, of necessity, divided into those obvious symptoms of vascular derangement, as congestion, and into those changes which affect the tissues themselves, the textural or parenchymatous. This distinction between the vascular and the extravascular changes can be as well founded on the order or succession of phenomena as on differences in the parts affected. The two groups of effects stand to one another in the relation of antecedent to consequent, the *vascular* changes being the earliest to take place.

The link between the vascular and extravascular phenomena is *exudation*, meaning by the act of exudation a passing out of plasma from the blood. At the beginning of inflammation—the moment of injury—blood rushes to the part injured with increased velocity, and in increased quantity. If the injury be trifling this is all that happens, but if it be severe the results are less transitory: the vessels become filled with blood, which stagnates in the capillaries of the part. Then follows a leakage of the liquid parts of the blood from the spoilt vessels into the tissue, producing the symptoms of redness and swelling. Thus the initial stages of the inflammatory process are three in number—viz., 1st, determination or *afluxus sanguinis*; 2nd, capillary congestion—*turgor* or *stasis*; 3rd, exudation. Each of these terms has been used loosely by writers at different periods, so that it must not be taken for granted that because the same terms were used in the past that the same things were meant by them as at present, or that because the older writers used different terminology they did not mean the same things that we do.

The first use of the word "determination" has been attributed to Paré. John Hunter called it the "incipient enlargement of the vessels," and in no part of his treatise does he use the word "determination." He says:—"The very first act of the vessels when the stimulus which excites inflammation is applied, is, I believe, exactly similar to a blush. It is, I believe, simply an increase or distension beyond their natural size. This effect, we see, takes place upon many occasions: gentle friction on the skin produces it; gently stimulating medicines have the same effect," &c. Then he goes on to describe an experiment which is an admirable instance of his physiological acumen. In it he directs that an incision be made on the inside of a dog's thigh. "By pulling the cut edges asunder, and observing the exposed surface, we shall see the bluish or ash-coloured cellular membrane covering the different parts underneath, with a few arteries passing through it to the neighbouring parts. But in a little time we shall see these vessels increasing in size, and also smaller vessels going off from them that were not before observable, as if newly-formed or forming; the number and size shall increase till the whole surface shall become extremely vascular, and at last the red blood shall be thrown out in small clots on the exposed surface, probably through the cut ends of the arteries that only carried lymph before." A more striking instance is given in another part of his treatise, where he relates how, on cauterisation of a patient's toe, the dorsum of the foot became swollen and reddened, and all the veins of the leg became distended. It is impossible to read Hunter's writings without being struck with the accuracy of his observations and the justness of his appreciation of phenomena; but the same clearness is wanting when he enters on theoretical discussions, and, unfortunately, his followers cherished these, rather than the facts from which his inferences were drawn. His theory was, that in the initial stage of inflammation there was a dilatation or paralysis of vessels, and yet he speaks of it as an increased action. He compares it to a blush, with this difference, that whereas in the blush the dilatation of vessels is transitory, in inflammation there is a special action in the vessels following an inflammatory cause which will soon lead to other changes in the natural structure of the parts. He goes on to say that "when we consider the whole of this as a necessary operation of nature, we must suppose it something more than a simple relaxation; we must suppose it an action in the parts to produce an increase of size to answer particular purposes; and this I should call the action of dilatation, as we see the uterus increase in size in the time of utero-gestation, as well as the os tincæ in the time of labour, the consequence of the preceding actions, and necessary for the completion of those which are to follow." These considerations led Hunter to institute an analogy between inflammation and overgrowth of parts, every part increasing "in some degree to the action required. Thus, we find muscles increase in size when much exercised; vessels become larger in proportion to the necessity of supply—as, for instance, in the gravid uterus; the external carotids in the stag, when his horns are growing, are much larger than at any other time; and I have observed that in inflammation the vessels become larger, more blood passes, and there appear to be more actions taking place." These comparisons are unfortunate, and during the seventy years which have followed Hunter they have been repeated again and again, so that, being untrue, their influence has been the more detrimental. To understand his point of view it must be remembered that the one fact on which he based his statements was that of the enlargement of the arteries and veins. Hence, he concluded that the quantity of blood passing through the inflamed part was increased, not distinguishing between the conditions of afflux and of capillary congestion. His descriptions, indeed, show that he was quite familiar with the fact of capillary congestion, for he accurately notes the permanent redness of the part and the existence of capillary hæmorrhage; but he certainly did not know the true cause of these, and believed that the blood continued to flow through the capillaries with the same velocity as in the primary afluxus. Hunter's comparisons fail us in not being applicable to any part of the process. For example, in the enlargement of the mammary glands during pregnancy there are two changes taking place *pari passu*—viz., (1) enlargement of vessels, and (2) growth of gland. These changes are combined—there is a "solidarity" between them, and one cannot be said to be cause of the other. In none of these cases has it been shown that the increase in growth depends on increased blood-supply. The rabbit-fancier, in order to produce the "lop-ear," exposes the creature to the cruel influence of radiant heat on repeated occasions; and a similar overgrowth of the rabbit's ear can be produced by dividing the vascular nerves. But this can only be successful when the animal is still growing—in which case increased circulation will promote growth; but when the animal or organ is no longer young and has ceased to grow, no excess of growth or new growth will be produced by increasing the vascularity of a part. So if it were possible to produce an afflux of blood to the non-pregnant uterus, there would be no overgrowth resulting. Probably, had the question of the mammary gland in pregnancy been put before Hunter, he would have said that the gland caused the enlargement of the vessels, but that this did not apply to inflammation.

# Correspondence.

"Audi alteram partem."

## THE ARMY SANITARY COMMISSION.

*To the Editor of* THE LANCET.

SIR,—Will you be so good as again to allow me space to state a few more facts regarding the work of the Army Sanitary Commission which you have again criticised in last week's LANCET. You have quoted at length the criticism of the Commission on the absence of sufficient sanitary information in the reports on the Cholera Epidemic of 1872 in India, as invalidating certain conclusions which the Commission nevertheless drew from the reports. The fact to which I wish to direct your attention is, that this criticism was applied, not to absence of sanitary information on the part of medical officers only, but to absence of information from the Cantonment Committees also. There are two sanitary authorities—namely, medical officers for regiments and these committees for stations, which latter are included in an expression of regret that so little had been done by this inquiry on the part of *local authorities* to elucidate local causes (same report in which the criticism occurs, page 308, par. 35). The whole information required could only have been obtained by the co-operation of both departments, and hence it never occurred to us to cast doubts on the ability of some fifty able and experienced Indian medical officers on a question of etiology, merely because the sanitary information in their reports was defective, for which they were not the only parties responsible. In their own personal inspections and communications with regimental officers, they appear to have had no suspicion of cholera poison having been conveyed in drinking-water (although several of them believed that the disease was communicable), for on this important etiological fact the reports are silent. Further, the authorities in India afforded to these officers an opportunity of reconsidering their reports, and they have substantially adhered to their statements, including those on sanitary points, while on

the etiological question which has given rise to the present discussion they have preserved their former silence. I draw no inference; my object is to call attention to the fact.

You have likewise criticised a paper of the Commission on local conditions attending typhoid fever in India, which certainly is not a report on the subject, but mostly a condensation of a number of statements in themselves intended chiefly to give the results of a preliminary investigation instituted by the Indian authorities with a view to future extension to other stations, if such a step were warranted by the facts arrived at. This course was necessary because typhoid fever occurs under a different topographical distribution in India than it does at home, and several of the usual concomitants of the disease in England are not so manifest at these stations. For example, there are no sewers or house-drains through imperfections of which sewer gases could find access to living-rooms or water-cisterns. This preliminary inquiry answered its object, and this was really all it was intended to do.

As you have referred to Dr. Murchison, will you allow me, in conclusion, to state that immediately on the appearance of the second edition of his work on Fevers, the India Office, on our proposal, sent copies to every important station of British troops in India.

I remain, Sir, yours truly,

London, Dec. 14th, 1875. JOHN SUTHERLAND, M.D.

## THE RECENT OUTBREAK OF TYPHOID FEVER AT CROYDON.

*To the Editor of* THE LANCET.

SIR,—Your remarks are so correct generally on sanitary subjects, that I have looked week by week for more correct information in respect to the recent outbreak of typhoid fever at Croydon. Will you allow me to state a few facts in reference to the history of, I am glad to state, our late calamity.

After ten years' almost entire freedom from the disease, it has appeared twice this year, and each time simultaneously over the whole water district, especially, however, the higher levels. At its first appearance the Board of Health (which is constituted, as a whole, of men of business habits and great intelligence) voted the £14,000 to increase their pumping power and water-supply, and attended generally to the advice of their Sanitary Committee and medical officer of health. And on the appearance of the second epidemic, every effort was made to discover the causation and prevent the recurrence of this pest. Amongst other causes, the existence of the large overflow-pipe in the reservoir tower has been mentioned. This has been there for the past eleven years, and is about 4 ft. above the level of the water. It was well trapped, the top of the reservoir itself being ventilated by a huge trap door, and the water in a constant state of motion. Dr. Buchanan is making every endeavour to unravel the mystery, aided in every way by the members and officers of the board; and we are confident that, with our increase of supply and power, we shall again be able to provide cheap and pure water to the inhabitants of this, for the last ten years, almost the healthiest district in England.

Many strictures have lately appeared in the public prints on the conduct of the members of our Board of Health. I confess I do not see their justice. We must not forget that they are the custodians of the public purse as well as the public health. When Dr. Buchanan's report is published, it will be seen how far they were to blame.

Hoping you will find room for this letter in an early issue, as the town is beginning to suffer from the spread of utterly fallacious reports, founded on your remarks,

I am, Sir, yours truly,

ALFRED CRESSWELL, F.R.C.S. E.,

December, 1875. Member of the Croydon Local Board of Health.

DUBLIN HOSPITAL SUNDAY FUND.—Last year the collections were £3306, but this year, although nearly fifty additional churches have joined in the movement, the result has not been satisfactory, and the total amount is much the same as in 1874. The inclemency of the weather on the 14th of November, the day fixed for the collections, is the chief explanation that can be given for this result.

# Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Dec. 23rd:—

Dell, Joseph Francis, Dunstable, Beds.
Hayes, Thomas Edward Darley, Burton-crescent.
Horsman, Godfrey Charles, King-street, Portman-square.
Jones, David Rhys, Camden-street.
Mason, John Wallis Barron, Osnaburgh-terrace, Regent's-park.
Osborne, John Henry, Southwell, Notts.
Popert, Adolph Joseph, Workworth-terrace, Limehouse.
Smith, Stephen Francis, Stretton Villas, Hackney.
Steil, George Robert, Park Villas, Shepherd's-bush.
Weller, John, Amersham, Bucks.

The following gentlemen passed the Primary Professional Examination on the same day:—

Reginald Clarke, King's College; Richard Clarke and William Jenkins Quicke, Westminster Hospital; George Holloway, Queen's College, Birmingham; Augustus Charles Morton and Jeremiah Reader, Guy's Hospital; William Kay, St. Bartholomew's Hospital; David Edward Thomas, St. Thomas's Hospital.

A PORTRAIT (three-quarter size) was last week presented by "some friends and former pupils" to Professor Apjohn, who some time since resigned the Chair of Chemistry in the medical school of the University of Dublin.

BRITISH MEDICAL DEFENCE ASSOCIATION.—At a general meeting of the members of the British Medical Defence Association, held at the Guildhall Tavern, Gresham-street, City, on the 21st ult., Dr. B. W. Richardson, F.R.S., in the chair, the following additional vice-presidents were elected for the ensuing year—viz., Dr. Herbert Davies, Dr. A. Ernest Sansom, Dr. C. J. White (Snodland, Kent), and Mr. Spencer Watson, F.R.C.S. Dr. Herbert Davies was unanimously elected honorary treasurer.

NORWICH MEDICO-CHIRURGICAL SOCIETY. — The third meeting of this Society was held at the Norfolk and Norwich Hospital on Tuesday, Dec. 7th, Dr. Pitt in the chair. The following papers were read:—"On Obstruction of the Bowels," by Dr. Bateman; "The Therapeutic Value of Quinine in Enteric Fever," by Dr. Waddell; "Notes on a Case of Catalepsy," by Mr. Turner; and "On the Local Use of Cold in Abdominal Inflammation," by Dr. Eade. The next meeting will be held on Tuesday, Jan. 4th.

ADULTERATED TEA. — From and after Saturday, Jan. 1st, a provision in the late Food Act will take effect, by which all tea imported as merchandise will be subjected to examination by persons appointed by the Commissioners of Customs, and samples taken to analyse, and if found to be mixed with other substances or "exhausted" tea, is not to be delivered except with the sanction of the Commissioners, and if in the opinion of the analyst it is not fit for consumption it is to be forfeited and destroyed. The term "exhausted" tea means any tea deprived of its proper quality by decoction or otherwise.

# Medical Appointments.

ALLDEN, J. H., M.R.C.S.E., has been appointed House-Surgeon to the London Hospital, vice Boase, resigned.

ANDERSON, R. J., M.D., has been appointed Demonstrator of Anatomy at Queen's College, Belfast, vice Charles, appointed Professor of Anatomy and Physiology at Queen's College, Cork.

BENNETT, Dr. H. S., has been appointed a Visiting Physician to the Margaret-street Infirmary for Consumption and Diseases of the Chest, vice Jagielski, appointed a Physician in Ordinary.

BLACKBURN, R. B., M.R.C.S.E., has been appointed Medical Officer to the Eckington Medical Association, Derbyshire, vice Rigby, resigned.

COLBY, W. T., M.R.C.S.E., has been appointed Medical Officer for the Malton District and the Workhouse of the Malton Union, Yorkshire, vice Wm. Colby, M.R.C.S.E., resigned.

COOPER, W., M.R.C.S.E., has been appointed Medical Officer for the Farnworth District, and Public Vaccinator for the Farnworth and Widnes Districts of the Prescot Union, Lancashire, vice Greenup, deceased.

DE WOLFE, G. H. H., M.D. Canada, M.B., C.M. Univ. Edin., has been appointed Medical Officer to the Tintern District of the Chepstow Union, and to the Tintern Abbey Iron and Wire Works, vice Audland, resigned.

DUKE, R. R., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Western District of the Cerne Union, Dorsetshire, vice Ewens, resigned.

EASTON, J. A., M.D., L.R.C.S.Ed., has been appointed Medical Officer to the Tharsis Mines, Province of Huelva, Spain: £250 per annum.

FLOOD, Mr. F. P., has been appointed an Assistant Resident Medical Officer to the General Infirmary, Leeds, vice Horne, resigned.

FOX, O. A., L.D.S.R.C.S.E., has been appointed Hon. Dentist to the Brighton and Hove Dispensary, vice Brown, resigned.

FROBISHER, Mr. W. M., has been appointed an Assistant Resident Medical Officer to the General Infirmary, Leeds, vice Dawson, resigned.

HARRISON, H. W., L.R.C.P.Ed., L.F.P. & S.Glas., has been appointed Surgeon for the Central Division of the Borough of Sheffield Police.

INGLIS, A. M., M.D., has been appointed a Consulting Physician to the Worcester Infirmary.

IRVINE, J. P., M.D., M.R.C.P.L., has been appointed Lecturer on Forensic Medicine at the Charing-cross Hospital Medical School, vice Poore, appointed an Assistant-Physician to University College Hospital.

JACKSON, E. C., M.R.C.S.E., L.R.C.P.L., has been appointed House-Surgeon to St. Mark's Hospital.

JANISCH, B., M.B., has been appointed Visiting Assistant-Surgeon to the Newcastle-on-Tyne Dispensary, vice Johnson, resigned.

LACE, J. I., L.R.C.P.Ed., L.F.P. & S.Glas., has been appointed Medical Officer and Public Vaccinator for the Lamplough District of the Whitehaven Union, vice Flinn, resigned.

MARSHALL, Dr. H. F., has been appointed Medical Officer to the Bluecoat School, Birmingham, vice Suckling.

METCALFE, Mr. P. H., has been appointed an Assistant Resident Medical Officer to the General Infirmary, Leeds, vice Lee, resigned.

MORTON, A. S., M.B., C.M., M.R.C.S.E., has been appointed Senior Resident House-Surgeon to the Royal London Ophthalmic Hospital, vice Buller, resigned.

PYE-SMITH, R. J., L.R.C.P.L., M.R.C.S.E., has been appointed House-Surgeon to the Royal London Ophthalmic Hospital, vice Morton.

REID, W., M.B., C.M., has been appointed House-Surgeon to the Stroud General Hospital.

SPOWART, T., L.R.C.P.Ed., L.R.C.S.Ed., L.M., has been appointed Surgeon for the Walkley Division of the Borough of Sheffield Police.

THORPE, G. E. K., M.R.C.S.E., has been appointed Surgeon for the Bromhill Division of the Borough of Sheffield Police.

THURSFIELD, W. N., M.D., M.R.C.S.E., has been appointed Medical Officer of Health for the Newport Urban Sanitary District, Salop.

WALTER, W., B.A., M.B., L.K.Q.C.P.I., L.R.C.S.I. (late House-Physician), has been appointed House-Surgeon to the North Staffordshire Infirmary, Stoke-upon-Trent, vice Faulkner, resigned.

# Births, Marriages, and Deaths.

## BIRTHS.

ANDREWS.—On the 27th ult., at Eversleigh, Hampstead, the wife of James Andrews, M.D., of a daughter.

BUTT.—On the 16th ult., at South-street, Park-lane, the wife of Wm. F. Butt, L.R.C.P.I., M.R.C.S.E., of a daughter.

DUNCAN.—On the 23rd ult., at Manlochy, Ross, the wife of Dr. Duncan, of a daughter.

GROSVENOR.—On the 16th ult., at Ladbroke-grove, the wife of Geo. Fox Grosvenor, M.D., of a son.

KING.—On Christmas Eve, at Harley-street, the wife of Robert King, M.B., of a daughter.

MIDDLEMIST.—On the 24th ult., at Bedford-place, Russell-square, the wife of R. P. Middlemist, M.R.C.S.E., of a daughter.

TYLECOTE.—On the 29th ult., at Sandon, Staffordshire, the wife of J. H. Tylecote, M.D., of a daughter.

## MARRIAGES.

FOSTER—KING.—On the 21st ult., at the Parish Church, Hampton-in-Arden, Warwickshire, Reginald Henry Foster, M.R.C.S.E., of Knowle, to Constance, daughter of the late Edward J. King, Esq., of Packington, Warwickshire.

KNOX—LONGRIDGE.—On the 19th of Nov., at Santa Lucia, Charles Frederick Knox, L.R.C.P.Ed., of Port of Spain, Trinidad, to Anna Eliza, daughter of J. A. Longridge, Esq.

## DEATHS.

BALL.—On the 26th of Nov., at Little Sutton, Cheshire, J. W. Ball, M.D., M.R.C.S.E., aged 62.

COX.—On the 23rd ult., suddenly, at Woodside, Kenilworth, Wm. Sands Cox, J.P., D.L., F.R.S., late of Birmingham, in his 75th year.

CROOKENDEN.—On the 21st ult., at Lincoln House, Kensington, Dr. H. Crookenden, aged 57.

FANT.—On the 9th ult., at Litchurch, Derby, Patrick Fant, L.R.C.S.Ed., aged 65.

FOTHERGILL.—On the 19th ult., at Stoke Newington, John Fothergill, Surgeon, aged 69.

HARRISON.—On the 12th ult., at the Lunatic Asylum, Douglas, Isle of Man, A. R. Harrison, M.D., Resident Medical Superintendent, aged 40.

HINTON.—On the 16th ult., at St. Michael's, Azores, J. Hinton, M.R.C.S.E., late of Savile-row, aged 54.

KERR.—On the 11th ult., at Edinburgh, Wm. D. Kerr, M.D., aged 63.

LLEWELLEN.—On the 14th ult., at Newington-causeway, William P. J. Llewellyn, L.R.C.P.Ed., aged 46.

OWEN.—On the 4th ult., at Fishguard, Pembrokeshire, Wm. Owen, Surgeon (in practice prior to 1815), aged 78.

SARGENT.—On the 21st ult., at the Suffolk Lunatic Asylum, Melton, Geo. Sargent, M.R.C.S.E., aged 30.

SEWARD.—On the 23rd ult., Thomas Seward, M.D., late of the 90th Regiment Light Infantry, and third son of the late Samuel Seward, Esq., of Weston, near Petersfield.

SHORTO.—On the 11th ult., at Portswood, Wm. Burt Shorto, L.K.Q.C.P.I., aged 33.

SPEIRS.—On the 25th ult., at St. Vincent-street, Glasgow, John Speirs, L.F.P. & S.Glas.

SYNNOTT.—On the 15th ult., at Bishop-Auckland, Patrick A. Synnott, M.R.C.P.Ed.

WARDEN.—On the 10th ult., at Landport, Thos. Warden, M.D., aged 37.

WETHERELL.—On the 22nd ult., at Highgate, N. T. Wetherell, M.R.C.S.E., aged 75.

*[N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.]*

# Notes, Short Comments, and Answers to Correspondents.

### CHLORAL AS AN ANÆSTHETIC.

M. BOUCHUT stated at the Congress of Brussels that he obtains anæsthesia in children with from forty-five to sixty grains of chloral at one dose. It is especially in very severe cases of chorea that most benefit has been obtained. The dose just mentioned was continued for a month or six weeks, so that the same little patient absorbed during that time no less than seven or eight ounces of chloral. When from forty-five to sixty grains are given at one dose, the child soon goes to sleep, and anæsthesia is complete in about one hour. If then an abscess is to be opened, the incision is made, the child being asleep. The latter may just sigh or groan, but falls asleep again; and when it awakes, three or four hours afterwards there is no knowledge of what has been done. When teeth are to be extracted, they manage in this way: At eight o'clock A.M. the nurse gives forty-five or sixty grains, according to age, at one dose, and the child falls asleep in twenty minutes. At nine o'clock the dentist comes, and extracts the carious tooth; or even two may be removed. The child groans and moves about without waking, and soon becomes again motionless. After about four hours the child awakes, and knows nothing of the operation. With children, then, chloral seems an excellent anæsthetic in the doses mentioned above; but it should be noted that no such result can be obtained with adults.

*Dr. Sequin*, (Philadelphia.)—We are sorry we cannot exchange.

### THE FORAGE ALLOWANCE OF ARMY SURGEONS.

*To the Editor of* THE LANCET.

SIR,—In your issue of the 11th December you notice "the last thing in the way of forage allowance," and all that you say is much to the point; but there are one or two conditions I wish to bring prominently to the notice of "candidates" for medical appointments.

A. is a young surgeon, and is sent to do duty at a station where his duties require him to be mounted. At considerable expense he provides himself with horse, saddle, bridle, and stable appointments, and for six months all goes well. It is true that he was obliged to buy his horse at the period when horses were dearest in the market; but, besides feeling that his purchase enables him to do his work well and efficiently, he has derived much pleasure from the possession of a horse, and feels, on the whole, satisfied with his position. But suddenly he is ordered to perform a different duty. Forage is stopped, and he has to sell his horse for half what it cost him. A month has scarcely elapsed when he is ordered to perform another duty which requires the use of a horse. He feels he cannot without getting into difficulties buy another, and endeavours to do his duty by walking all distances possible, and hiring for the more distant calls. The first month it so happens that the latter are few, and some ten or fifteen shillings pays his livery-stable bill for the month. This sum, in accordance with par. 3 of clause 163 A.C., he recovers on W.O.F. 1071, the Government saving the difference between 2*s.* 4*d.* a day, the forage allowance, and his claim—viz., from £2 10*s.* to £3. But next month the conditions are widely different. A number of severe cases lying at the extremity of his circle of duty have required his constant attendance. His livery-stable bill for hire of horse or conveyance amounts to over double the forage allowance for this month under said par. 3. The Government disallow so much of his claim as exceeds the monthly forage, and he finds himself some £4 or £5 out of pocket.

This is no imaginary case, and I have no doubt that many will tell you that when this unjust regulation was in force years ago they were frequent losers by it, and in consequence of its injustice, and the representations made to former Secretaries at War, the rule was relaxed, and it was sufficient that the officer drawing forage proved that he had arranged to have a horse whenever he was required to be mounted. He was thus able to make the two ends meet; for it is notorious that, even with the forage allowance intact, an officer keeping a horse is, unless in a regiment, out of pocket, for the 2*s.* 4*d.* a day only pays for the horse's keep and stable, and barely that, and makes no allowance for a groom. A regimental officer gets a bat. man; the staff and departmental officer has to employ his personal servant, or to hire another at his own expense.

It is said that in 1865 a Warrant granting most of our just demands was actually in print; but when the seventy-five candidates that entered at that time were secured, the document was destroyed, and the verbal promises made to them disregarded. Candidates, now is your time. *Hold back, and decline to enter your names for examination and competition till a Warrant has been issued granting all just demands;* and while helping those now in the service to the just reward they are entitled to for past services, you will secure for yourselves advancement and comfort while serving, and a competency on retirement, which will never be granted by the Treasury unless the Government feel they must do justice to secure recruits. If, on the other hand, you believe the ambiguities issued from Whitehall-yard and the War Office, and come forward in sufficient numbers to enable the Government to tide over their difficulties, you will be simply dooming yourselves to *disappointment*, and at the end of your career will know that you have only yourselves to thank for a wasted life and an old age of poverty, unless, indeed, you fall a step still lower in the scale, and, after giving the best years of your life to the service, you are served like Surgeon Spurway, by being placed on half-pay without half-pay, which practically means that you will be dismissed the service on the merest quibble, to enable an economical (!) Government to save your half-pay. Put your shoulders to the wheel, and make them see that HONESTY IS THE BEST POLICY.

December 15th, 1875.

*The Secretary to the National Association for the Repeal of the Contagious Diseases Acts* should address his communication to the local journals from which our information was derived.

### ERGOTININE.

M. TANRET, a pharmacien of Troyes, in France, has presented to the Academy of Sciences of Paris a paper, wherein he states that he has succeeded in isolating the actual alkaloid of ergot of rye. For some time past ill-defined substances have been extracted from the ergot, one in particular by Bonjean, who gave it the name of ergotin. This being the case, the author of the paper, having actually obtained a stable and solid alkaloid, wishes to give it the name of ergotinine. The latter exists in the ergot in very small proportions, and it is easily altered in the open air, which circumstance renders its extraction difficult and delicate. The author describes the mode of preparation, which mainly consists in obtaining, by alcoholic distillation, a residue composed of a layer of fat, an extractive fluid, and some resin. From the first two substances, treated separately, the alkaloid is obtained by the use of ether, sulphuric acid, and chloroform on the one hand; and by distillation, chloroform, &c., on the other. The ergotinine has, of course, an alkaline reaction; it gives precipitates with the double iodide of mercury and potassium, with phospho-molybdic acid, tannin, chloride of platinum, &c. It is soluble in alcohol, chloroform, and ether, and becomes speedily changed when exposed to the air. Its principal reaction is to turn reddish-yellow, and then strong blue violet, with moderately strong sulphuric acid.

### RESULTS OF EATING APPLES AND PORK.

*To the Editor of* THE LANCET.

SIR,—Dr. M'Calman's case of "Hæmorrhage and Peritonitis after Eating Cheese" reminds me of two somewhat similar cases which have occurred in my own practice.

CASE 1.—Miss A. N——, aged nineteen years, who is in the habit of eating large quantities of apples, went to a ball on Jan. 16th, 1871; was "unwell" two weeks ago; always had good health.

On Jan. 22nd she was seized with violent pains in the bowels, and about one A.M. on the 24th her state was as follows:—Lying on back; countenance indicative of great pain, which had been more violent in the bowels, accompanied with sickness, during the last six hours; tongue dry, loaded with white fur; no pyrexia; pulse 120; right inguinal region dull on percussion, very tender, tenderness limited to space no larger than palm of hand. Opiates gave temporary relief.

25th.—Although the bowels had acted slightly once or twice since the commencement of the attack, I gave her very slowly a warm-water enema (two pints), which brought away a considerable quantity of fæcal matter and scybala. From this date she improved steadily, and her state was on Feb. 1st as follows:—Local tenderness much less; general slight tenderness in both iliac and hypogastric regions; whole abdomen hyper-resonant. This was greatly relieved by one or two doses of compound galbanum pill, five grains. Skin for the last four or five days hotter than natural; pulse 110.

On Feb. 2nd the pain in the right inguinal region returned, accompanied with sickness (caused most probably by taking too freely of milk). Another warm-water enema soon produced relief, and from this time she took no medicine, and was in her usual health in about ten days.

CASE 2.—MRS. G——, aged forty, a butcher's wife, and a delicate woman, having that waxen appearance so characteristic of Bright's disease, ate one Sunday plentifully of pork. The same night she was seized with sickness and vomiting, which continued more or less up to Tuesday morning, when I was requested to see her. She was then in a state of collapse, from which she never rallied, and died early the following morning. In this case it is impossible to speak positively, but most likely the too bountiful meal of pork was the exciting cause of death.

*Remarks.*—Was the cause of the complaint detailed in Case 1 "the habit of eating largely of apples"? I think so. Although there was none visible in the vomit or motions, it is most probable that apple was *fons et origo mali*. I may as well mention also that this case occurred during a very severe frost. There was never complete obstruction; but I believe there would have been had not the enema been used. The dulness and tenderness in the right inguinal region were removed to a very great extent shortly after the first injection. Had I used the enema immediately I saw the patient, I believe convalescence would have been complete at the end of a week. These simple warm-water enemata, given *very slowly*, I think deserve more attention. The administration of them should not be left to a nurse, unless she is a well-trained one, and implicit confidence can be placed in her. When the obstruction is situated high up in the intestine, the operation should last fifteen or twenty minutes, and not five minutes, which is considered a long time by some nurses.

With regard to Dr. M'Calman's case, even supposing twist of the intestine had nothing to do with the fatal issue, it is more than possible that the "brandy, Cayenne pepper, and other condiments," which were "freely administered" before the doctor arrived, contributed in no small degree to the result. It appears to me that this case was one in which copious warm-water enemata, *very slowly* administered, had they been employed early enough, might possibly have averted the death of the patient. As I think in my own case (Case 1) the immediate use of an enema would have shortened my patient's illness by two weeks, so in Dr. M'Calman's, I cannot help thinking, the result might have been different had he used the same means immediately he saw her. Although, apart from organic disease, many gastric and intestinal disorders undoubtedly arise from excess of solid food, sometimes, though very rarely, speedily terminating in death, I cannot believe that over-indulgence in solid food is at all equal to over-indulgence in drink, either in the production of disease or the destruction of life.

I am, Sir, yours faithfully,
E. T. TIBBITS, M.D. Lond.,
Bradford, Dec. 20th, 1875. Physician to the Bradford Infirmary.

### A RECTIFICATION.

WITH reference to a paragraph in our issue of the 18th December respecting an announcement in the *Gazette Hebdomadaire*, we are requested by a gentleman on the staff of our contemporary to state that it was "Huebbenet de Saint Petersburg" who was referred to in the *Gazette*, and not the late Dr. Hughes Bennett. We have much pleasure in making the *amende*.

*Union Medical Officer.*—Our correspondent writes from a combined sanitary district, to which we apprehend the following provision of the Public Health Act, 1875, section 286, applies:—"There may be assigned by the Local Government Board to the district medical officers of any union comprising or coincident with any constituent district such duties in rendering local assistance to the medical officer of health appointed for the united districts as the said Board may think fit; and such district medical officer shall receive, in respect of any duties so assigned to him, such additional remuneration to be paid by the local authority or authorities of the district or districts within which his duties under the section are performed as these authorities may, with the approval of the Local Government Board, determine." In uncombined sanitary districts, it is competent, we believe, for the sanitary authority, if they think fit, to enter into an arrangement to pay the district medical officer reasonable remuneration for supplying to the medical officer of health information necessary for the efficient discharge of his duties. In the combined districts the district medical officer has no choice as to the remuneration he receives for the kind of work in question; in the uncombined districts virtually the position is the same, unless the whole of the profession in the district unite in opposition to any unreasonable proposal.

*H. H.*—Not under the Lunacy Act.

### VENTILATION OF ROOMS.

*To the Editor of* THE LANCET.

SIR,—For the proper ventilation of hospital wards or of other rooms, especially in large towns, I have a plan which I think is as near perfection as possible; and I have found such great advantages from its use during the recent cold, foggy weather that I am anxious, through the medium of your journal, to describe it to the medical profession.

It is a very simple modification of Mr. Tobin's system, and consists in the air being obliged to pass through two parallel tubes lined with common house-flannel, so that it must go up the one and down the other before it enters the Tobin tube and the apartment. The advantages thus gained are, that the air is almost perfectly filtered, and all the disagreeable effects of fog prevented. The sound from the direct opening into the outer air or street, as the case may be, is completely deadened, and the sudden rush of soot or smoke is avoided. A less advantage is that the apparatus is less unsightly than the long, straight air-shaft, and may even be made (as it is in my drawing-room) an ornamental feature. It is difficult accurately to describe it without the aid of diagrams; but I shall be happy to show and explain the working of it to any responsible person during reasonable hours. In my rooms the air-shafts are 5 ft. 6 in. from the floor, with an orifice of 10 in. by 2½ in. The filtering box projects seven inches from the shaft, in the form of a small pedestal cupboard three feet high. Thus the whole apparatus occupies a superficial area of a square foot. The lid of the box opens for the double purpose of removing the flannel tubes to replace or wash the flannel (which with me becomes filthy in a very short time), or to increase the volume of air, which, of course, is diminished by passing over the linings. In times of sickness the vapours of disinfectant fluids may be diffused, or the rooms agreeably perfumed. In this cold weather the Tobin system is too severe for most people; but with this modification and these advantages I think it will be appreciated by all, even the most delicate.

Yours obediently,
51, Wimpole-street, W., Dec. 1875. N. STEVENSON, M.R.C.S.E., &c.

### THE ANTIDOTES OF STRYCHNINE.

AT a meeting of the Society of Therapeutics of Paris, M. Constantine Paul said that the treatment of poisoning by strychnine should fulfil three indications: 1. Cause the patient to reject all the poison if possible, or at least whatever has not yet been absorbed. 2. Administer harmless substances which may render the poison inert—viz., in most cases, insoluble. 3. Treat the symptoms of poisoning. These three indications are carried out by evacuants, antidotes, and antagonists. Among the evacuants the author dwelt especially on apomorphine as likely to give good results. As to antidotes, they are principally iodine and tannin. M. Bouchardat, in respect of iodine, has given the following formula:—Iodine, ten grains; distilled water, about one ounce and a half; iodide of potassium, about twenty grains for solution. It requires about one drachm of this solution to precipitate one grain of strychnine. This precipitate is, however, not harmless, and should be as soon as possible evacuated.

### PRESERVATION OF VACCINE LYMPH IN CAPILLARY TUBES.

*To the Editor of* THE LANCET.

SIR,—Without offering any explanation as to how or why vaccine lymph will sometimes "stick" in a capillary tube, I can tell your correspondent, Dr. Purvis, how to get the lymph *out* of the tube when such is the case.

Let Dr. Purvis take up the refractory tube by the middle; place it firmly between his right forefinger and thumb; and then, holding the tube perpendicularly, smartly strike his closed *left* fist with the ulnar edge of his right palm. This will "start" the lymph, after which it is easily blown out. It may be necessary to strike the hand twice or thrice; but I have *never* known the "treatment" to fail.

I am glad to know that another brother vaccinator adopts the method "of picking up the lymph from the opened vesicles by means of a tube." I have followed this plan for years, and have found it an immense advantage over the old-fashioned way of "scraping" the vesicles with the lancet.

Your obedient servant,
T. LAWRIE GENTLES,
Derby, Dec. 14th, 1875. Public Vaccinator, Derby Union.

*To the Editor of* THE LANCET.

SIR,—In reply to Dr. Purvis, I beg to say that the drying up of lymph in tubes I have found very common, especially, as he remarks, with that from typical vesicles. If the tube is held a few seconds in warm water, the lymph will again become liquid.

Yours truly,
WM. WOODWARD, M.D.,
Worcester, Dec. 16th, 1875. Public Vaccinator.

### SKODA.

THIS venerable physician has just reached his seventieth year, and on that occasion he has received, though labouring under severe indisposition, the congratulations of the delegates of all the learned bodies of Vienna. A medal has been struck to commemorate the event, and seldom have professors and students been so unanimous in paying respect to the man who, many years ago, commenced by his works and lectures to impress the world with his complete familiarity with all matters regarding internal disease, especially complaints of the chest. Through a long series of years Skoda has held the sceptre of the pathology and treatment of internal complaints at the University of Vienna, and fully does he deserve the compliment paid him on his seventieth birthday. He is making a worthy use of the wealth acquired by professional exertion, and has lately largely contributed to several medical funds for the benefit of medical students.

### SANITARY REFORM IN INDIA.

*To the Editor of* THE LANCET.

SIR,—I addressed a letter to you on the above subject on the 5th inst.; but as Mr. Macnamara, in his letter inserted in your journal of the 11th inst., has referred the diminution in the rate of mortality in India with the British troops to precisely the same causes as myself, I need not repeat these arguments on the present occasion. There is one omission, however, in Mr. Macnamara's letter which I trust you will allow me in common fairness to make good, and in order that the truth may be ascertained on this important question. I allude to the ratio of mortality immediately previous to the introduction of sanitary reform in India.

Dr. Sutherland, in his letter to you of the 27th ult., remarks: "The British army, from its complete system of statistics, affords the most striking illustration of these (sanitary) improvements. At the time when the Royal Commission on the Sanitary State of the Army in India began its inquiry, in 1859–60, the average death-rate among British troops in India was 69 per 1000 per annum. Last year it was a shade above 15½ per 1000." If, however, we turn to the source thus pointed out, we shall find a very different result—at least as regards the ratio of mortality in 1859–60. No Army Reports were published before 1859, excepting by the Indian Medical Boards for the troops of the late East India Company; while the returns for Bengal for that year are not given. We must therefore commence with 1860. Now, the ratio of mortality this year, instead of being 69, was only 31·23 per 1000—38 per 1000 less. That there was a ratio of 69 per 1000 formerly is undoubted; but then we must go back a long series of years in order to find it, and then only with the European troops of the late East India Company, who remained in India twenty-one years. In Ceylon the ratio with the Royal troops from 1837–46, as given in the first Army Medical Report, was 41·74 per 1000, and in 1859 only 35·06. From 1850–54 the average ratio, as given in the Report of the Commission before referred to, was 41·47 per 1000. It has been reduced to nearly one-half since; but then this reduction cannot be referred to sanitary reform, as the following facts well demonstrate. Sanitary reform in India was inaugurated by Sir John (now Lord) Lawrence in 1864, the first Board of Health having been established shortly before my arrival at Calcutta in the autumn of that year. If, therefore, we take three years before that date and three years subsequently, we shall be enabled to ascertain what the result has been of the adoption of sanitary measures in India. Now, the average ratio of mortality with the British troops for the three previous years, 1861, '62, and '63, was 23·96 per 1000. For the years 1869, '70, and '71 the average is 23·85—a few fractions less. In 1872 the ratio was still higher, 28·64. As to the low rate of mortality in the past year, as stated by Dr. Sutherland, the returns not having been yet published, no deduction can be drawn from a single year, particularly in a climate like India, subject to visitations of cholera every two or three years, at which time the mortality is necessarily increased. Besides, if a great reduction took place in the rate of mortality irrespective of sanitary reform, we have a right to assume, if a still further reduction occurs, that it is to be referred to the same cause or causes, not to different ones.

Your obedient servant,

London, Dec. 18th, 1875. J. PARKIN.

### EXPERIMENT ON A MAN RECENTLY HANGED.

SEVERAL Philadelphia physicians obtained permission to perform experiments on a subject of this kind. Half an hour after death the laryngeal nerve was laid bare, as the problem consisted in learning whether, in paralysis of the larynx on one side, the nerve of the same side or of the other is affected, thus determining whether there is an interlacement of nerves. Dr. Keene, Professor of Physiology and Anatomy, was entrusted with the task of carrying out the experiment. The corpse was seated in a chair in the position of a patient whose throat is to be examined. An electric current was applied to the nerve, and an assistant held a mirror in the man's mouth, so as to ascertain which side of the larynx would contract. The experiment was decisive, and it was found that irritation of the right nerve caused contraction of the right side of the larynx.

*Mr. Francis Hird* is thanked.

### INEXPENSIVE ASYLUMS.

*To the Editor of* THE LANCET.

SIR,—Could you or any of your readers kindly inform me in what direction to look for an inexpensive asylum for idiots, and where the laborious and tedious process of election does not exist. I am interested for an adult step-brother of my own, the expense of whose maintenance almost entirely devolves on myself. For any information on the subject I shall feel extremely obliged. Yours faithfully,

J. DE BURGH GRIFFITH, M.B., &c.

Wotton-under-Edge, Dec. 28th, 1875.

### LETTS'S DIARIES.

THESE well-known Diaries for 1876 are, as usual, got up with great care, and are full of concise information on business and other matters. Notably the "Visiting List" is so good that it would be difficult to suggest any improvement.

*Mr. William Davis* should write to the Secretary of the College.

### AN APPEAL.

IN consequence of the death of the late Mr. John Samuel Beale, M.R.C.S., who practised as a surgeon at Paddington for nearly thirty years, his widow has been left without any means for her future support. Some of his medical brethren have therefore determined to raise a fund to enable Mrs. Beale to proceed to Canada, where a brother has offered her a home. Mr. Henry Hodson Rugg, M.R.C.S., 1, Grove-road, St. John's-wood, N.W., and Dr. Walter Goddard, 107, Edgware-road, Paddington, W., have kindly consented to receive subscriptions, which will from time to time be acknowledged in THE LANCET.

*A Subscriber.*—All medical inspectors of emigrants are now appointed by the Board of Trade.

### MILITARY MIDWIVES.

*To the Editor of* THE LANCET.

SIR,—Thanks to the excellent endeavours of the much-respected Dr. Sinclair (whom I, an unworthy pupil of his, will ever remember with deepest feelings of gratitude), properly-trained army midwives are now available in every garrison town; but let me assure you, Sir, they are seldom called upon. "Sairey Gamp" yet reigns supreme, and will do till an order is issued by the military authorities to prevent the employment of those "handy women," as they are termed. Nothing short of this will ever secure us the practice which it is considered we are justly entitled to; and until this most desirable "order" is promulgated, we shall be unable to reflect the credit due to the training received, and the great trouble taken with us, in that humane establishment, Sir P. Dun's Hospital Maternity, Dublin, of which Dr. Sinclair is the head.

In the interest of the 271 army midwives already sent forth, and those to come after us, I pray you will permit this letter to appear, in order that it may be clearly understood that plenty of qualified army midwives are available for attendance upon the married women of the army, but are nearly absolutely without practice in consequence of "Sairey" being always ready to do the business for a mere trifle, and *kindly* permitting their unfortunate patients the use of stimulants *ad libitum* both before and after the interesting event, the deplorable results of which can be ascertained by a reference to the column "Died" in the Annual Regimental Sick Returns.

I remain, Sir, your humble servant,

AUGUSTA MARY NOLAN,

Fulwood Barracks, Preston, Dec. 19th, 1875. Army Midwife.

### EUCALYPTUS GLOBULUS.

*To the Editor of* THE LANCET.

SIR,—I observe that a discussion has been going on lately respecting the Eucalyptus. If any of your medical friends would like some leaves of this plant, I shall be happy to send them some.—Yours truly,

Bagshot, Surrey, Dec. 1875. JOHN WATERER.

### TREATMENT OF TAPEWORM BY COPAIBA.

AT a late meeting of the Pathological Society of New York, Dr. Caro presented a specimen of tapeworm which had been expelled by a patient under the influence apparently of balsam copaiba, prescribed for another complaint. The patient in question had suffered from symptoms of tapeworm for some years, and had tried the usual remedies for their relief. Balsam copaiba was prescribed in large (half-ounce) doses; but one dose only was taken, which had the effect of acting freely on the bowels and expelling the worm.

### THE "PITH MACHINE."

*To the Editor of* THE LANCET.

SIR,—I see that your issue of Dec. 11th contains an account of a new section-cutting apparatus for frozen tissues by Dr. Pritchard. Without wishing at all to depreciate Dr. Pritchard's ingenious machine, I should like to advocate to your readers another method. It consists in placing the fresh tissue in a Ranvier's microtome (a little French section machine that only costs twelve francs), and then putting the whole concern for a few minutes in the mixture of ice and salt; three minutes is quite enough. If the section to be cut be too small to fit any of the tubes, it must be embedded in gum-water; or if it have a tendency to turn round after being frozen in one of the tubes, it must be taken out, dipped in gum-water, and re-frozen. As a rule, however, no difficulty will be experienced. This machine is known as the "Pith machine," which is a very great pity, since it keeps many from using it. The best way to use it is to fit the piece of tissue into one of the tubes, without any embedding whatever, and then you have all the advantages of a section machine, with none of its disadvantages in the way of losing time &c. I am aware that many section-cutters will strongly condemn this paragraph; yet I am persuaded that this little machine needs only to be more known to be popular.

I remain, Sir, yours truly,

FRANK T. PAUL,

Royal Infirmary, Liverpool, Dec. 20th, 1875. Resident Medical Officer.

### RESECTION OF THE ANKLE-JOINT.

*To the Editor of* THE LANCET.

SIR,—In his bibliography of resection of the ankle-joint in your issue of Dec. 18th, Mr. West recalls "the names of those who have performed the operation, and who have expressed their opinion in favour of it," taking his starting-point from Mr. Hancock's cases published in 1857. Permit me, as an old student of Dr. Moses Buchanan, of Glasgow, late lecturer in Anderson's University, and senior surgeon to the Royal Infirmary of that city, to point out that he was for many years in the habit of eulogising the above operation, which he termed "the most simple and beautiful exhibition of conservative surgery." He was a strong opponent of Mr. Syme of Edinburgh, who at that time considered the elbow-joint as the only one deemed fit for resection, and his own operation at the ankle the only one for diseased joint. Dr. Buchanan (although by no means the first) performed this operation in 1850, and by his writings was the means of bringing it prominently before the profession. He made only one incision—viz., along the edge of the peroneus tertius, removed the external malleolus, dislocated the astragalus inwards, and removed its superior half, together with the articulating surfaces of the tibia and fibula. A full account of it may be found in the *Glasgow Medical Journal* for 1864. Yours faithfully,

Gosport, December, 1875. R. M.

### VINCENTO PINALI.

THIS eminent member of the profession in Italy died on the 7th December, at the age of seventy-three. Dr. Pinali was President of the Faculty of Padua, Professor of Therapeutics, and one of the most popular physicians of Upper Italy. He was enthusiastically devoted to his profession, and his teaching was highly appreciated by his numerous pupils. He was, above all, a clinical physician, and eminently practical. Without being wedded to his opinions, or showing retrograde tendencies, he was careful to avoid the mere cultivation of novelties. He led a most active and laborious life, and the hours he could snatch from teaching and practice he devoted to his books. To testify to his regard for his pupils, he has left his library to the Faculty of Padua, and also a legacy of £4000 for the gradual purchase of new works.

*MR. D. M. ROSS.*—Our correspondent had better consult our advertising columns for the last few weeks.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir W. Fergusson, London; Sir Henry Thompson, London; Dr. Brown-Séquard, Paris; Mr. H. Smith, London; Dr. Bell Pettigrew, Edinburgh; Mr. Hutchinson; Dr. B. Hicks, London; Mr. Brudenell Carter, London; Mr. B. Barwell, London; Dr. B. W. Richardson, London; Dr. Senftleben; Dr. Colthurst; Mr. Bodine, Trenton, U.S.; Dr. Sequin, Philadelphia; Mr. B. Browne, London; Mr. Jackson, London; Mr. Ross; Mr. Berry, Wigan; Mr. Hird, London; Mr. Williams, Kirkwall; M. Henocque, Paris; Mr. Kebbell, York; Mr. Patchett, Manchester; Mr. Hulke, London; Dr. H. Simpson, Manchester; Mr. Wollaston, Liverpool; Dr. Hall, Brighton; Mr. Clarke, Heckmondwike; Dr. Russell, Glasgow; Mr. Kearsley, Much Wenlock; Mr. Freeman, London; Mr. W. E. Poole, London; Dr. Wiltshire, London; Dr. Lowndes, Liverpool; Mr. Sheehy, Ebbw Vale; Mr. Alldin, London; Dr. Cobbold, London; Dr. Chapman, London; Dr. GreatRex, Lawton; Mr. Irvine, Garstan; Mr. H. G. Cumming, Exeter; Mrs. Beale, Holloway; Dr. Griffith, Wotton-under-Edge; Mr. Reeves; Mr. Crowe, Hartlepool; Mr. Stokoe, Beddington; Dr. Moriarty, Tralee; Mr. J. Ward, Belfast; Dr. Esler, Belfast; Mr. C. Williams, London; Dr. de Chaumont, Southampton; Mr. A. D. Berry, Blackheath; Dr. Murray, Cherryvale, Kansas; Dr. Mackenzie, Cincinnati; Mr. Jukes, Halifax; Dr. Crane, Hallaton; Mr. Paul, Liverpool; Dr. Martin, Weston-super-Mare; Dr. Aitken, Netley; Dr. Lynch, London; Dr. Dickson, Buxton; Messrs. Brand and Co., London; Dr. Welsh, Kinghorn; Mr. R. Harrison, Liverpool; Mr. F. Godfrey, London; Mr. Heather, London; Mr. Jordan, Birmingham; Mr. Coope, Bolton; Mr. Kebbell, Hove; Mr. Robertson, London; Mr. C. R. Keetley, London; Dr. MacKenna, London; Mr. J. Lloyd, London; Messrs. Fox, Brislington; Mr. Davies, Llanelly; Mr. Weir, Nottingham; Mr. Kendal, Hexham; Mr. Potter, Whitchurch; Mr. Marriott, Leicester; Mr. Moon, Brighton; Dr. Woodward, Worcester; Mr. E. Rickards, Birmingham; Dr. M'Donnell, Dublin; Mr. Bowman, Sunderland; Mr. Adams, London; Dr. Waters, Chester; Dr. Roberts, Manchester; Dr. Harland, Wadhurst; Mr. Coulton, Birmingham; Dr. Bennet, Buxton; Dr. Lucas, London; Dr. Tibbetts, Bradford; Mr. Lestourgeon, Cambridge; Mr. Parks, Bury; Mr. Annandale, Edinburgh; Dr. Latham, Cambridge; Mr. Buchanan, Chester; Dr. Russell, Birmingham; Dr. Harvey, Aberdeen; Dr. Jordan, Edgbaston; Dr. Spencer, Clifton; Dr. Woodhouse, Reading; Mr. Burd, Shrewsbury; Mr. Carstairs; Mr. B. Hawkins, London; Dr. Branson, Sheffield; Mr. Murphy; Dr. Roberts, Keighley; Mr. Bedford; Dr. Gray, Oxford; Mr. Gibson, London; Mr. German Reed, London; Dr. Reynolds, Dublin; Mr. Eaton, London; Mr. Wright, Worcester; Mr. Cresswell, London; Mr. Banks, London; Dr. Farquharson, London; Dr. Eade, Norwich; Dr. Medd, Southport; Mr. Heale, Winchester; Mr. S. Snell, Sheffield; Dr. Faber, Wurtemburg; Mr. Vose, Liverpool; Dr. Bramwell, Newcastle-on-Tyne; Mr. Ormsby, Dublin; Dr. Hamilton, Liverpool; Dr. Philipson, Newcastle-on-Tyne; Mr. MacCormac, London; Dr. Ferrier, London; Dr. Wadham, London; A Graduate of London and Cambridge; L.; M.R.C.S., Romford; The Secretary, Hanover-square Club; X. Y. Z.; Medicus, New Brighton; W. B. C. R.; H. H.; X.; Commune Bonum; W. W. E.; Xerxes; Registrar-General of Births, Deaths, &c.; R. N.; L.R.C.P. Edin.; Philochemicus; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Le Page, Brandon; Dr. Yonker, Ontario; Dr. Curran, Lifton; Mr. White, London; Dr. Wilson, Greenock; Mr. Hardman, Blackpool; Mr. Byass, Wallingford; Mr. Westaway, Bristol; Dr. Soutar, Golspie; Mr. Elliott, Carlisle; Messrs. Brown and Co., Aberdeen; Mr. Lamb, Albrighton; Mr. Corns, Manchester; Mr. Jones, Llanslin; Dr. Curran, Lew Down; Mr. Evans, Seaford; Mr. Kershaw, Middleton; Dr. Hills, Thorpe; Mr. Dearden, Douglas; Mr. Blakeley, Crogham; Dr. Tylecote, London; Mr. Jennings, Coleford; Mr. Macpherson, Middlesborough; Dr. Adams, Queen Camel; Mr. Huey, Everton; Dr. Eastwood, Darlington; Dr. Macpherson, Tarbert; Surgeon-Major Ferguson, Dunbar; A. D., Dorchester; Reflex; L.R.C.P.L.; Medicus; M.R.C.S., Knutsford; Medicus, Dover; J. G.; E. J., Sheffield; Students, Brighton; M.R.C.S.E.; H. C. W.; Y. Y. Z., Merborough; W. A.; Q. C.; M. B., Bristol; Medicus, Reading; R.; Epsilon; M. P. S.; Medicus, Newcastle.

*Manchester Guardian, Birmingham Morning News, Surrey Advertiser, Metropolitan, Solicitors' Journal, Academy, Newcastle Daily Chronicle, Welshman, Huddersfield Daily Chronicle, East London Observer, Cork Constitution, Pharmaceutical Journal, Colonies, Liverpool Daily Post,* and *Western Morning News* have been received.

## METEOROLOGICAL READINGS

*(Taken by Steward's Instruments.)*

THE LANCET OFFICE, DEC. 30TH, 1875.

| Date. | Barometer reduced to Sea Level, and 32° F. | Direction of Wind. | Wet Bulb. | Dry Bulb | Solar Radia in Vacuo | Max. Temp. Shade | Min. Temp. | Rain-fall. | Remarks at 9 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Dec. 24 | 30·28 | W. | 45 | 48 | ... | 47 | 43 | ... | Raining |
| " 25 | 30·27 | N.W. | 43 | 43 | ... | 49 | 41 | ... | Fine |
| " 26 | 30·49 | N.W. | 44 | 45 | ... | 49 | 43 | ... | Overcast |
| " 27 | 30·54 | S.W. | 47 | 48 | ... | 49 | 46 | ... | Overcast |
| " 28 | 30·55 | W. | 42 | 45 | ... | 48 | 43 | ... | Overcast |
| " 29 | 30·43 | W. | 43 | 45 | ... | 48 | 43 | ... | Overcast |
| " 30 | 30·32 | W. | 44 | 46 | ... | ... | 44 | ... | Overcast |

# Medical Diary for the ensuing Week.

### Monday, Jan. 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Lettsomian Lectures: Dr. C. Theodore Williams, "On the Influence of Climate in the Treatment of Pulmonary Consumption."

### Tuesday, Jan. 4.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. Annual Election of Officers and Council.—The following Specimens will be exhibited:—Injury to Radius; Deformity from Rheumatic Gout; Aneurism of the Heart; Aneurism of Mitral Valve; Displaced Kidney; Trachea and Fatty Tumours from a Case of Sporadic Cretinism; Sarcoma of Sciatic Nerve; Cancer of both Breasts and Ovaries; Artificial Teeth removed from Trachea; the Amyloid Reaction in the Dysmenorrhœal Membrane; Anomalous Blood-cyst; Fibroma of Ovary; &c. &c.

### Wednesday, Jan. 5.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Annual Meeting; Election of Officers and Council; Reports, and other business.—Specimens.—President's Address.—Dr. Routh, "On a Case of Extra-uterine Fibroid successfully treated by Gastrotomy."—Dr. John Williams, "On the Mechanical Action of Pessaries."—And other communications.

### Thursday, Jan. 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

### Friday, Jan. 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

### Saturday, Jan. 8.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.


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**Agent for the Advertising Department in France—**
Mons. DE LOMINIE, 209, Rue Grenelle St. Germain, Paris.